THE BUILDER

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HOUSES AND THE UNEMPLOYED.

THE acute problem of unemployment has again drawn attention to the possibility of absorbing unskilled labour on house-building. There is a serious shortage of houses. Consequently, it is argued, to make good the shortage would be an economic method of absorbing unemployed labour, even if it be not a remedy. The idea is undoubtedly attractive, and we refer to it now as it is likely to be discussed in the near future in Parliament.

The point is raised in Mr. Strachey's book, "Economics of the Hour," but unfortunately he assumes that the shortage of houses is due to two factors: because there is a positive shortage of labour, and because the workmen are not working as hard as they should. The fact is 100,000 men in the building trade are unemployed, which means that there is not sufficient demand for building work at the present time. Admittedly this argument cannot, in fairness, be applied to the building of houses. There can be no wide demand for houses while their economic value is artificially restricted by the rent Acts, and the trouble is not that we are short of labour to build houses, but that we are short of people who are willing to pay for them. The whole problem must be viewed in proper perspective, and we must be chary of attributing faults to an industry whose goods have no real economic value at the present time. If we are considering the question of bringing in unskilled labour to build more houses, we must inevitably face the question that someone must pay for the houses. If this means relying upon the Government we are back exactly where we have been for years. If there existed even a normal demand for houses (and this really means the ability and inclination to pay for them) the whole building industry would be fully employed and able to absorb extra labour.

The demand for houses from private owners is, generally speaking, very slight; there is very little inducement to build from a speculative point of view, and but for the help from the Government the amount of house-building would be almost negligible, if we consider our annual requirements and the capacity of the building industry. Examined in this light, the suggestion for dealing with unemployment by organising companies and battalions of men for work on housing does not appear so alluring. The idea certainly deserves serious attention if, as is submitted, the two great and most pressing problems of the moment are met at one and the same time. If the building trade is not fully employed there must be a reason. If, for the sake of argument, we attribute this to the high cost of building we can only assume that the intention is to lower the cost by absorbing unemployed labour from other trades. If not, it is obvious there can be no increased demand for houses unless we compel ourselves to build them through the Government. On the other hand, no Government will sanction the spending of public money in training unskilled labour and in paying a scale of wages above the standard of any other trade. The problem is, clearly, a delicate one for the building trade. If it is the question of cost which is restricting the demand, it would, it has been suggested, be in the interests of the building trade to lower the rate of wages to bring the demand and absorb their own unemployed first. Otherwise we can only suggest the Gilbertian cause that the unemployed in the building trade should be trained for some other industry which is busy. To reason on these lines is manifestly absurd, yet we are dealing with an absurd anomaly when we pay unemployment doles to one hundred thousand men in the building trade and at the same time can entertain the idea of absorbing unemployed from other trades.

If the demand for houses could be stimulated, the building trade could, and would absorb the extra labour which would be required. In our opinion this course is infinitely more desirable than the idea of swelling the ranks of building tradesmen without first examining the causes which are preventing building operations on a bigger scale. In some respects the problem is less complicated than many. Free Trade and Tariff Reform have nothing to do with it; we have no houses sent to us from abroad, and apart from the rent restriction Acts it is merely a question of demand and supply.

Undoubtedly we must make allowances for many prospective owners who feel that building costs are too high, but even so our sympathies lie with the building industry, which has to face the disagreeable fact that many people have ceased to regard house-building as an individual responsibility. To secure a roof over our heads is, and should be, one of the first considerations in any civilised country (the recent housing Acts are proof of this contention), but in these days it is hardly an exaggeration to say that many people are more interested in being able to scrape together sufficient means to purchase a small motor-car. Are we not, in our desire to move about, forgetting and neglecting the elementary fact that it is a physical necessity to live somewhere? We fully admit the difficulty in proving that one problem has anything to do with the other, and it is easy to dismiss the philosophy on these lines. We are definitely assured by economists that had there been no rent Acts there would have been fewer motor-cars, since more money would have been required either for increased rents or for building houses. We have no criticism to make of any social development; in a free country the individual must have liberty to decide what form his luxuries will take, bearing in mind the fact that we are told there is a shortage of one million houses. If the matter ended at this it would be immaterial whether we had houses or motor-cars, but unfortunately the same legislation which protects us in our houses makes it obligatory to take up the burden of building them.

To induce the man of moderate means to invest in a small car, the instalment system of payment has recently been introduced by many manufacturers. The significance lies in this: that if we cannot afford to build a house it is more essential from a national point of view to rent out of income than "motor out of income." There is certainly no blame attached to those who are protected by the rent Acts; on the contrary, it is stressing human nature to ask anyone to forgo his motor-car as part of the extra cost in building a house, which, so far as he is concerned, may also be regarded as a luxury. This philosophy of life is reacting right through our social structure, and the building trade must take these factors into account in its deliberations. Credit is due to motor-car manufacturers for their wisdom in bringing down prices to stimulate the demand. We see an economic truth justified, and the moral should not be lost sight of by the building trade.

It is for the building trade to face the various arguments which have been put forward; we have tried to help by discussing the situation as we see it. The country is obsessed with the idea—which is probably quite sound—that it is easier to train battalions of unskilled labour in a few weeks to do the work of house-building than it was to drill and train them into soldiers. Houses are pictured in this country similar to those in America, in the Dominions, and in the overseas world generally, where men build the houses in which they live. Some people have even toyed with the idea that we would again see quaint rural cottages racy of the soil; all the better if they lacked the exquisite precision and intricate details of the skilled tradesman. We would not minimise the fact that the necessity for houses is serious, but let us not confuse the necessity which compels a man to build himself a house with his own hands with the artificial necessity we have ourselves created which compels us to build our own and our neighbours' houses. It is evident that the sooner housing costs reach an economic rental level the better will it be for the building industry.

Meantime, we think it is more important for the building trade generally to study the reasons why there should be any unemployed at all than to shuffle the distribution of labour, oblivious of the economic truth that a man should do the work for which he has been trained. We would prefer to see the building trade dealing with the economic problem in its own way, and on its own initiative, rather than public opinion should force a situation which carries a sentimental appeal based upon fallacies and an imperfect knowledge of all the conditions.

NOTES.

The Architecture Club.

THE association of architecture with dining leads to congenial and flattering estimations, and we feel soothed by the reiteration of the importance of what we are concerned to find important. Yet this may be overdone. So Mr. Gosse, in his speech at the fifth quarterly dinner of the Club, pointed out that architecture was the only art of universal application, that a man might live without poetry or music, painting or sculpture, and so on, statements rather embarrassing to some of those present who may have felt a desire to be saved from such friends. This anxiety to say ple sant and gracious things may none the less lead us far away from the facts. Without poetry and the other arts we should most probably still be living in trees, and the application of tree dwellings to architecture is surely a little remote. How such ideas strike others may be inferred from a letter which we print in our correspondence columns.

The Sherborne Abbey Glass.

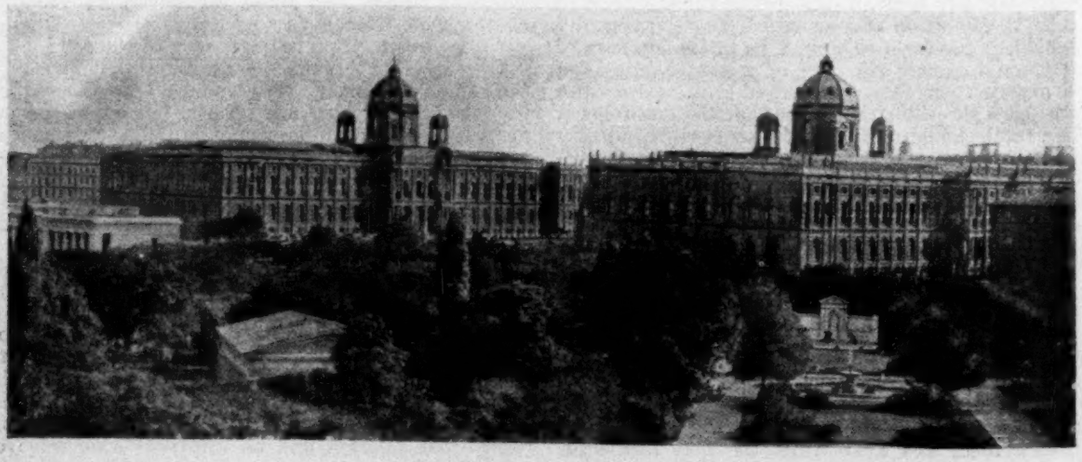
THE discovery of a quantity of ancient glass in this Abbey is an event of considerable interest. The glass appears to have been removed, from an account of it appearing in the *Times*, from the upper parts of the choir windows, when they were filled with stained glass at the time of the nineteenth century restorations. It is fortunate that some of the old glass then removed should have been put on one side instead of being destroyed. While it will not be possible to reconstruct the series in its entirety, there are, in spite of being very much mixed up and broken, good heads and other pieces remaining, and we hope that these will be very carefully laid out, and if some reasonable additions of new glass will complete any panel in which bits are lost, steps will be taken to secure that this is done by a good artist, and that the purism, which might lead through a mistaken zeal to refrain from any such restoration, will not triumph. We are unable to judge, not having seen the glass, as to what is possible, but in the hands of a good craftsman the gaps, if not too many in a particular panel, can be made good, and is a legitimate and desirable form of restoration. And the gain over filling in the gaps with plain glass, when done properly, is incontestable, as the spotting of the painted glass with plain glass is very disfiguring to it. But it is through the more sympathetic appreciation of the artist rather than in the commercial approach that such restoration is alone possible. This Sherborne glass is said to be unquestionably English and fifteenth-century work. Mr. Bernard Rackham, the head of the Department of Ceramics at the Victoria and Albert Museum, in whose care the glass has been during the last few months, says that he has never come across anything like it in all his experience of English glass. The present find includes some shields which are apparently contemporaneous with the rest, including those of the family of Beaufort, one of, presumably, the consort of Henry of Lancaster, and others. They have, however, unfortunately suffered under reconstruction, probably in the eighteenth century.

The Imperial Institute.

THE original purpose for which this institution was founded is not one which is now within the bounds of practical possibility of fulfilment. The great developments during the last generation or so have all tended to make the aims of such a central organisation, as the Imperial Institute was originally intended to be, impossible. In thinking of possible new scope for such an Institute, and one which might be stimulating to national interests, it occurs to us that as a home for the exhibition and extension of their publicity, and as a department devoted to English handcraft industries and for societies identified in the production of such work, the fostering of which is so desirable, a profitable use could be made of such a centre. The furtherance of the interests of such work is particularly important just now on national grounds, and should effect important reactions on the standard of British industries. There are also other collateral directions which such a centre should include, embracing fine as well as applied art. We are beginning to take a more reasonable view of the relation between the latter and ordinary manufactures, and that in providing such a centre we are only extending trade facilities seen in their larger attributions.

Artistic Industries.

THE line which has been drawn in the past between manufactures and more directly artistic industries is seen to be artificial. We have assisted the former by much organisation and subsidy. The British Industries Fair, the Department of Overseas Trade, being examples of such. We are beginning to see that a like support is equally desirable for industries connected with a more personal craftsmanship, and that the small workshop and the individual craft worker should not in the interests of the national welfare be left neglected. We are no doubt only at the beginning of these more enlightened conceptions, but with the stimulus growing through a more extended training in craftsmanship, there is need for steps to be taken to consolidate the new developments arising through it. To foster these new directions is in the way of creating new wealth which we are much needing. At the present time, for the lack of a more corporate representation as the existence of such a centre as we suggest could bestow, this new and better craftsmanship is lacking in publicity and, therefore opportunity. The Imperial Institute, in becoming a centre for the advancement of these interests, would effect a powerful influence on the standards of more ordinary manufactures as well as assisting employment, and money



The National Museums, Vienna. (*See p.* 842.)

Selden Cottage
1681
Date on stone over door
GRATIUS HONESTE MIHI NON CLANDER UNITO
SEDESQUE HUR ABEAS NISI SU FACIA SOLUTA LIBI
AN HONEST MAN A FRIENDLY WELCOME MEETS
MY DOOR THOUGH OPEN NE'ER A ROGUE ADMITS
Legend on house - supposed to have been written by Selden when 10 years old

Selden Cottage, Woodbridge, Suffolk.
[This old building was recently burnt down.]

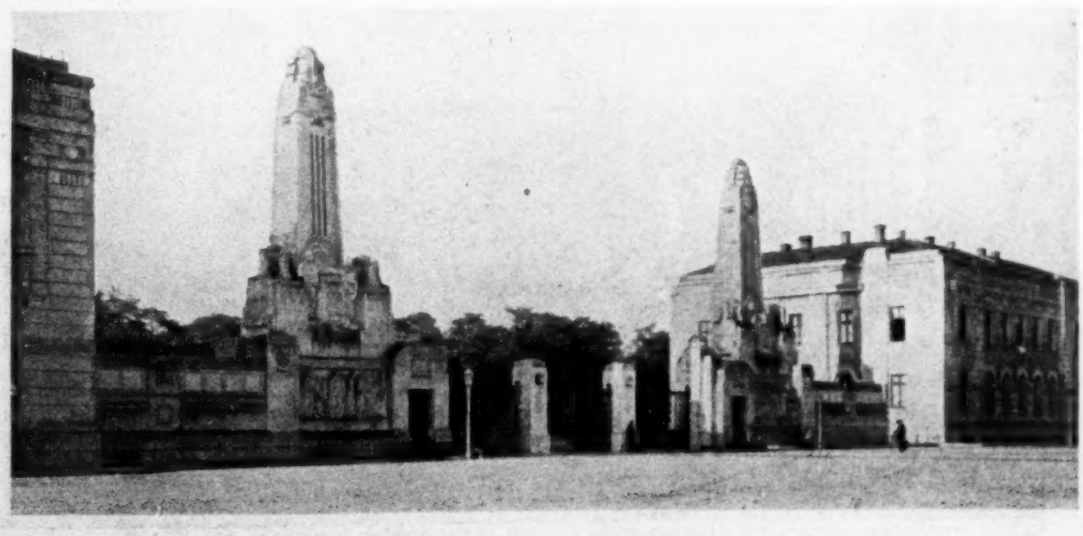
would be well spent in such a way, while the Imperial Institute, in becoming their home, should achieve a new lease of life.

The Mosaics at the Tate Gallery.

THE mosaics recently completed by Mr. Boris Aurep in the Blake Room at the Tate Gallery are interesting not only for themselves, but in their aim to promote an identity between the surroundings of Blake's work and the work itself. Along such lines there is room for a good deal of development in making our public galleries more accordant with the work shown in them, and it is also of value as pointing to the necessity for the employment of artists to carry out such work and to secure the distinction of treatment that is necessary in order to make such accompaniment suitable. How desirable this is we may see when in the National Gallery, which lacks in the decoration of the rooms the stamp of a more authentic artistic treatment. We are glad to see the further recognition of this in the employment of Mr. Aurep to carry out the mosaics on the floor of the Blake Room. A useful little instance and of more tentative character, providing a good illustration of the value of artists' work may be seen at the Suffolk-street Galleries, the walls of which have been painted recently by members of the R.S.B.A. themselves, the result being quite successful. A pleasant texture and colour has been given to the walls, possessing much more character than the smooth featureless tinting of the ordinary house decorator. The times call for this more direct appeal for the artist-craftsman in these ordinary services of life, and were he employed more often in such ways the many craftsmen now lacking employment could add much beauty and individual distinction to our homes and public buildings. The directors of the Tate Gallery are to be congratulated on an enterprise which is not only successful in itself, and of much credit to the artist, but also enlarges the scope of the application of art, and gives encouragement to the artist.

A Kensington Housing Issue.

THE issue of 1,247 ordinary shares and 300 three per cent. debentures, made by the Improved Tenements Association under the auspices of the Kensington Representative Housing Association, deserves a generous response, and, we may hope, will be followed in other boroughs. We have enough discussions of rival prejudices, disguised as principles, of past history and mutual recriminations. Slums and overcrowding persist, a peril to the poor and a menace to the health of society. The difficulty is not one for any political party to solve alone, nor for any political party to boast about. Nothing but intense and sustained public effort can end the social sickness, and the sooner this is applied and the more practical the application the better. Such associations owe their origin to that attractive power of practical idealism for ever identified with Octavia Hill. The work attempted does not claim to be a solution, but a palliative; but, with the solution so far away, we may be thankful for the palliative, and for every family that is lifted from disease and demoralisation. Cancer and tuberculosis are not allowed to go untreated because the cure is being sought, and the cure itself is often to be found through the experience gained in the palliative treatment. As a comment, the title of Improved Tenements is misleading. The Association, surely, is not pressing for more tenements, even if improved, but has derived its title from its efforts to improve and convert existing tenements? The objections to this form of accommodation are too many and obvious to need repetition.



Entrance to Cemetery, Vienna, by Hegele: 1905. (*See p.* 842.)

GENERAL NEWS.

Appointment.

Mr. W. H. Bateman, of Calne, Wiltshire, has been appointed Architect and Surveyor by the Hay (Brecon) Council for the new cattle mart to be erected at Talgarth, to accommodate 3,500 sheep, 200 cattle, besides pigs and other animals.

Obituary.

Mr. C. E. Clayton, who died at the age of 70 years, at Edburton, on November 27, was senior partner in the firm of Clayton & Black, architects, of Brighton, with which town he had been associated for over half a century He designed the buildings for the casino scheme formulated by the late Sir Joseph Lyons in connection with Sir William Forbes and the late Lord Bessborough. He was also consulted by the Town Council in the preparation of the plans for a grand opera house on the site of the Aquarium, and he was engaged in a similar capacity by the promoters of last year's scheme for the conversion of the property into a motor coach garage with roof garden. The concert hall on the West Pier is another of his works.

R.I.B.A. Statutory Examination.

The attention of architectural students is called to the statutory examination of the Royal Institute of British Architects. The Building Acts require every candidate for a district surveyorship to hold a certificate of competency of the Royal Institute of British Architects. In addition to certificates of competency for the office of district surveyor under the Metropolitan Building Acts, certificates are also granted of competency for building surveyor under the Public Health Acts. Many architects in the past sat for it who have never applied for a district surveyorship, but have taken the examination as a qualification for private practice.

Antique Furniture.

Mr. Mordaunt Rogers, F.S.I., F.A.I., gave the first of two lectures on "Antique Furniture" at the College of Estate Management last week. The lecturer took as the starting point of his lecture the eleventh century, the period which saw the building of the Gothic cathedrals in France. He then dealt with the changes through the various centuries, showing how the ornamentation of panels on chests was introduced in the early fifteenth century, followed by the enrichment of chests in the sixteenth century. He also showed how later in this century the practice of varnishing furniture was introduced. The lecturer also dealt with the various woods and their uses in furniture, and mentioned that the walnut tree was not introduced to England until the end of the sixteenth century. The lecture was illustrated with lantern slides provided by the authorities of the Victoria and Albert Museum.

The Surveyors' Institution Examinations.

The paper on the Elements of Copyholds will be omitted from the Intermediate Examination after March next; Elements of Building Construction being substituted in its place. The Enfranchisement of Copyholds will, however, be continued as a subject for the Final Examination, the syllabus being extended to cover the calculation of compensation payable under the Law of Property Act. (Insanitary areas: basis of compensation.)—The Council have had under consideration the effect in operation of Section 9 of the Housing (Town Planning) Act, 1919, and in particular the proviso thereto, which has been shown in recent cases to impose extreme hardship in certain instances. A communication on the subject has been addressed to the Minister of Health, giving particulars of cases where this result is to be feared, and suggesting that until amending legislation can be introduced special care should be taken to ensure that only houses which are in themselves insanitary and unfit for habitation should be scheduled as "red."

COMPETITION NEWS

Holmside.

FOR THE HOLMSIDE AND SOUTH MOOR COLLIERIES.—Designs for a cottage hospital. Sending-in day, December 7. (See advertisement this week.)

New Law Courts, Cairo.

The Competitions Committee of the R.I.B.A. are in negotiation with the promoters of this Competition in the hope of securing an amendment of the conditions.

Other Competitions.

Other competitions still open include the following (the dates given are, first the sending-in date, and second the issue of *The Builder* in which full particulars were given):—Singapore College (Jan. 1, 1924; March 30). Dudley Memorial (Jan. 5, 1924; Sept. 14). Eastleigh and Bishopstoke Assembly Hall—*Banned by R.I.B.A.* (Dec. 3; August 24). Memorials to the Missing (Jan. 1, 1924; Aug. 3). Newcastle Concert Hall (Feb. 1, 1924; Oct. 26). British Empire Exhibition Decoration (Dec. 17; Oct. 26). Essays on Concrete (Dec. 31; Nov. 16). Belfast Union Heating and Lighting (Dec. 18; Nov. 9). Essays on Heating and Ventilating (Mar. 31, 1924; Nov. 9). Bristol Police and Fire Station (Dec. 18; Nov. 9).

NORFOLK AND NORWICH ASSOCIATION OF ARCHITECTS.

A LECTURE on "American Architecture as I Saw It" was given by Mr. E. W. B. Scott, A.R.I.B.A., at the Technical Institute, Norwich, on November 23. The chair was taken by Mr. A. G. Howlett.

The lecturer said he visited the States and Canada in the spring of this year for the purpose of studying American architecture, because he believed the best work in the world was being done in America. During his visit he saw nothing to modify and much to confirm that belief. This was not to say merely that in America their wealth enabled them to erect expensive buildings, for their best work, while often rich, did not flaunt its costliness. He did not suggest that all American buildings were good—far from it. There had been during 30 years or more an amazing amount of building, and a large proportion in America, as was the case elsewhere, was not the work of architects at all. There was, of course, much that was bad; but he did say the average in America was higher than the average of modern works elsewhere, and the best in America was absolutely and unquestionably the best that was being done anywhere. There were, of course, numerous historical buildings in Europe of which he did not speak, and American architects were their greatest admirers. This was for architecture a time of experiment and gradual advance—of false starts and disappointments. The architecture of America was leading this pioneer work, and he asked them to study it with eyes not on the dead past, however lovely, but on the future. Only so could they appreciate the interest and significance of the buildings he was going to show them.

The Franzeusring, Vienna: The Parliament House on the Left. (*See p.* 842.)

KINGSTON-UPON-HULL ART GALLERY COMPETITION.

[BY AN ARCHITECTURAL CRITIC.]

THE Right Honourable T. R. Ferens having provided a site in Victoria-square, in the centre of Hull, and the sum of £52,000, for the purpose of erecting an Art Gallery, the Corporation retained the services of Mr. John W. Simpson, PP.R.I.B.A., as assessor.

The instructions to competitors, whilst strictly limiting the cost, left the arrangement of the galleries entirely to the discretion of the competitors. Briefly the accommodation required consisted of various offices, "a separate gallery of about 1,500 ft. super, or in conjunction with the paintings," for exhibiting works of sculpture, and hanging space for the present City collection of about 550 lineal feet of wall hanging space, and 490 feet for the loan collection. The only means of access to the site was from the Victoria-square. It was optional whether the accommodation was disposed on one or two floors; further, it was stated "The primary consideration is the exhibition of works of art rather than the architectural proportion or embellishment of the galleries." Some seventy-nine sets of plans were on view in the Guildhall, Hull, on November 22, 23, and 24 last, and none of them is faultless. The contest has been one between the adherents of top-lighting and those of top-side-lighting, there being 30 sets top-lit, 40 top-side-lit, and nine composite. Nearly all the top-side-lighted sets provide top light only for the sculpture. Although the majority of the competitors favour the top-side-lighting of their galleries, the question may perhaps still be considered an open one. A careful examination of the whole of the sets convinces one that it is easier by the top-lit method to evolve a satisfactory plan. Despite the difficulty, there are among the top-side lighted schemes some very excellent plans, but both of the premiated designs are simply top-lit.

The assessor states in his award:—"I have . . . been obliged to set aside many excellent designs after satisfying myself that they could not, at present building prices, be executed without exceeding this prescribed limit of cost."

There were about ten designs which appear as though they exceeded the stipulated sum, but, though in some cases they are fine buildings, they are yet poor art galleries. We only noted one design that would cause us any qualms to reject on account of cost. Eliminating the top-side-lighted sets, the assessment was no easy matter, and it would appear as though the final struggle had been between Nos. 15, 21, 44, and 59. If the writer had been the assessor the second place would have gone to one of these, and the first to the design No. 28, a top-side-lighted scheme. If it be conceded that the top-lighting is right, then, bearing in mind the conditions and cost, the actual winners are about half a point in essentials better than their rivals. The result is a disappointment. As will be seen from our criticism of the successful design, it is an accumulation of compromises.

The first premiated design, No. 15, is by Messrs. S. N. Cooke, F.R.I.B.A., and E. C. Davies, A.R.I.B.A. (illustrated in *The Builder*, November 23). They have adopted central ceiling lights, double glazed, their gallery section being apparently identical with that of the existing Corporation of Hull Art Gallery (which, though better than many galleries, is not perfect—it is modelled on that at Ghent). Their artificial lighting is concealed in the roof between the roof light and the ceiling light. The plan is simple. The accommodation is provided on two floors. There are seven galleries on the ground plan, all of adequate width and good proportion, grouped round the central sculpture hall. On the first floor is one gallery for the loan collection. In addition, pictures are hung round the upper part of the sculpture hall. We consider this a defect in the plan. As submitted, the plans show two galleries of the loan collection on the right hand side of the entrance, separated from the lift by the entrance hall. This would cause confusion when the loan collection was being rearranged. It could be obviated by reversing the use of the galleries and exchanging the position of the curator and sanitary conveniences. The ladies' and gentlemen's lavatories are too close together. The principal elevation to Victoria-square is in Ancaster stone in the Renaissance manner, well illustrated by the ½-in. detail, but hardly suggestive of the use to which the building is to be put. The elevations to the south and east are of brick, plain and incongruous. The building will be seen from three sides. It will be possible to see the front and part of the east elevation at the same time; it is a pity that they have no relation. But the authors, having spent their money where it will be always seen, have been obliged to neglect these two fronts east and south in order to comply with the clause as to cost. In thus deciding they are unlike the great majority of the competitors, who have treated the three elevations, though not of equal value, at any rate as a whole. Much as we dislike the pictures in the upper part of the sculpture hall and the neglect of the side elevations, we think the authors provide a slight margin of satisfactorily lit hanging space over the other top-lit competitors.

The second premium goes to Messrs. J. S. Gibson and Gordon. Their plan is better than the winners'. All the accommodation is on one floor, except the curator and ladies' lavatory. All the elevations are treated with respect. The lift is properly placed to serve the loan collection. But where they fail is in their method of lighting. They have only provided simple skylights without any outer glazing; these would cause trouble in practice. The elevations suggest the use of the building, but are in no way remarkable. Their artificial lighting is stated in the report to be concealed on the cornices of the gallery.

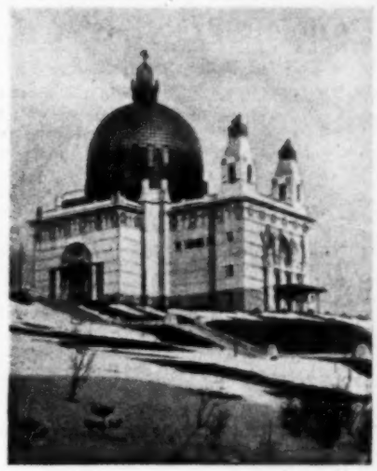
Among the top-lit designs deserving of comment are the following (where no address is given the authors are of London):—

No. 21, by Mr. E. Vincent Harris, places all the galleries on one floor. His sculpture hall runs from north to south of the site. His elevations are simple and scholarly. The building looks what it is. His roofs are double glazed. The porter's box is omitted. Could be built for the money.

No. 42. Messrs. H. V. Ashley & Winton Newman submit an imposing scheme for a fine building viewed from all sides. It does not appear to be adequately lit on the ground floor.

No. 59, Messrs. Lanchester, Lucas and Lodge. A bold building on two floors. Represented by a fine set of drawings.

No. 61, by Messrs. Forbes & Tate, FF.R.I.B.A. This is a design which is probably as good as either of the premiated, in some respects better. The lift is badly placed. The porter is not as well placed to supervise the entrance as in the winning design. Possibly this set was regarded by the assessor as likely to exceed the cost. It is cubed by the authors at 2s. 1½d. a foot.



Chapel of the Asylum, Vienna (1909).

By OTTO WAGNER. (*See p.* 842.)

The competitors who favoured the top-side-lighted methods, though defeated, are not disgraced.

No. 7, Messrs. Louis de Soissons & George G. Wornum, F.R.I.B.A., are represented by a beautiful set of drawings. Their sculpture hall traverses the site from east to west on the north front. The scheme No. 19, by Messrs. Horth & Andrew, of Hull, is entirely top-side-lit, including the sculpture hall. They have provided two floors with more accommodation than is asked for. The section through the galleries is ingenious. The curator has a big room in the basement. No. 24, by Mr. A. G. R. Mackenzie, F.R.I.B.A., is represented by a good design. His sculpture hall is not very well lit. No. 28, by Messrs. Taylor & Young, of Manchester, in our opinion, is the best of the top-side-lighted designs. The accommodation is all on one floor. The galleries are, perhaps, a shade narrow. The entrance to the galleries is from the sculpture hall; we do not think this a serious point. The porter is well placed. There are two lifts as in the winning design. The elevations are good and suggest the intention of the building. No. 35, by Mr. Dudley Harbron (Harbron & Robson), Hull, provides all the accommodation on one floor. His sculpture hall is insufficiently lit. No. 68, Mr. Cecil Alexander Sharp, F.R.I.B.A., like No. 19, is entirely top-side-lighted, including the sculpture, though in the sculpture hall the wrong wall appears to be illuminated. The sculpture hall is across the front of the site. It is too narrow, and not big enough. His loan collection is arranged *en suite* on one side of the entrance; his permanent collection on the other. He has an interior courtyard lighting the basement, and his elevations are the most unusual of all those submitted.

The Master Carvers' Association of London.

The annual general meeting of the Master Carvers' Association was held on November 23, at the studios of Mr. W. Aumonier. The President, Mr. W. D. Gough, having occupied his position for three years, vacated the chair, and Mr. Lawrence A. Turner was elected in his place. The following are the results of the other elections:—Vice-President, Mr. W. D. Gough; Hon. secretary, Mr. W. Aumonier; assistant hon. secretary, Mr. W. Whitworth Aumonier; hon. treasurer, Mr. J. D. Daymond; committee, Messrs. Bentham, Bradford, Broadbent, Frith, Hook, Morton, Southwick. The Master Carvers' Association is representative of employers of carvers in London, and any employer of stone carvers who is not already a member of this association is invited to apply to the hon. secretary, Mr. W. Aumonier, 84, Charlotte-street, Fitzroy-square, London, W.1.

CORRESPONDENCE.

Hull Art Gallery Competition.

SIR,—The result of this competition must be somewhat of a shock to those competitors who endeavoured to model their galleries on the now accepted and correct principle of lighting, for the reason that it has been conclusively proved by those who have devoted much study to the subject that the usual central ceiling lighted gallery is a failure.

In such gallery the spectator is better lighted than the picture, resulting in glitter and reflections; the spectator is compelled to adjust his eyes to two focal planes and suffers in consequence; moreover, the picture can neither be properly seen nor studied. That the picture and not the spectator should receive the greater light is well understood, if the glaring defects peculiar to the central top-lighted gallery are to be avoided, and that, therefore, the proper and correct lighting is the top side light, which is now an established fact.

Clause 10 of the Instructions contains the following:—"The Galleries may be disposed on two floors, and special consideration must be given to both daylight and artificial lighting. The primary consideration is the exhibition of works of art rather than the architectural proportion or embellishment of the galleries." It was fair, therefore, to assume that whatever the plan, this fundamental principle of lighting would be adhered to.

The assessor has selected a design which apparently is based on the central top-lighted gallery type, with its attendant defects. It seems quite hopeless, and one is tempted to ask, in view of this award, Why lectures by experts? Why the publication of papers and data in the Institute *Journal*? Why any definite decision? if the scientific and correct principles established are to be set aside.

The architectural treatment may be a matter of opinion and taste, but the fundamental principle of correct lighting is neither a matter of opinion nor a matter of taste; it is one of fact.

That the assessor has selected, *in his opinion*, under the circumstances, the most suitable design may be perfectly true; but the fact remains that in view of the considered opinion in favour of top side lighting, of those qualified by study to speak with authority, a design has been chosen which follows the old-fashioned central top lighting with its attendant defects.

Unless, therefore, one is to believe "A Different Assessor," "A Different Result," the existing competitive system sadly needs revision, and I suggest the constitution of a tribunal of experts, in the case of a single assessor, which should consider the award before the final decision were determined.

Croydon. W. BEVAN.

SIR,—Your recent letters and articles on the subject of competitions have awakened considerable interest, especially amongst the younger members of the profession. There is an increasing feeling that the present system of assessing is obsolete; a jury is essential.

May I point out a few facts concerning the recent Hull Art Gallery Competition. Quoting from the "Instructions,"—"Special consideration must be given to both daylight and artificial lighting. The primary consideration is the exhibition of works of art. . . ." Of recent years much time and study have been devoted to the perfection of a scientific system of lighting picture galleries. Mr. S. Hurst Seager has demonstrated the case very clearly. (*Vide* R.I.B.A. *Journal*, November 1912 and January 1923.) He has proved that satisfactory lighting can be obtained only by fulfilling two conditions: (*a*) the pictures must be so arranged that the source of light cannot be reflected to the spectator's eye; (*b*) a full and direct light must fall on the picture whilst the spectator must be kept in a more subdued light, to minimise the reflection of his own image. The latter condition has been utterly disregarded in the winning design, which repeats the monotonous fallacy of a glaring top light falling on the spectator. It is safe to predict that the results in practice will be highly unsatisfactory. That more scientific solutions were submitted is shown by the exhibition at Hull. If functional fitness be the essence of architectural design, how can the present award be justified? I realise, of course, that other conditions may have been such that the assessor considered them of primary importance, but, as a matter of principle, I do not wish to let this assessment pass without a protest against the repetition of demonstrated fallacy and the loss of one more opportunity for progress. Disregard of such matters cannot but tend to lessen the confidence of the public, to the detriment of the whole architectural profession. Relying upon the cumulative force of insistent repetition, I once again point out the urgent necessity of adopting the jury system of assessment.

I trust that all who read this letter may recognise in it a broad plea for the reformation of our methods, and the entire absence of any personal imputation whatsoever.

T. H. FIELDER.

The Cambridge Collegiate Buildings Competition.

SIR,—As one of the architects who was honoured with an invitation to take part in the competition for the new buildings for King's College, Cambridge, I feel very strongly that the letter published in your issue for November 16 and signed by Messrs. Tait, Holt and Rees, cannot be allowed to pass without comment. The authors of that document in making public their several private misfortunes appear to place themselves professionally in a very queer position.

They assert that the winners of the competition ignored the conditions, and instance as an example the fact that twenty instead of twenty-two sets of chambers were provided in the successful design. This arrangement any competitor was perfectly at liberty to adopt in his scheme if he thought fit, just as he was equally free, according to the conditions, to put his top story either in the roof or not, as he might think best. In the early stages of developing my own design, I, at least, tried these alternatives and for various reasons abandoned them. Perhaps it would have been better for me if I had not done so; but I am not now going to pretend that they were specifically ruled out by the conditions, and Messrs. Tait, Holt and Rees should not either. These gentlemen are at pains to imply that the assessor was unfit to act and that a result more satisfactory to them would have been obtained if a jury rather than an individual had been entrusted with the responsibility of judging.

I would point out that neither Mr. Tait, Mr. Holt nor Mr. Rees were under any compulsion to accept the invitation to enter the competition; that, if they had such definite opinions about the incapacity of the assessor and about the defects of the system of individual judgment, they should have declined to enter; and that if, in spite of these considerations they still desired to compete, they should have regarded themselves as bound to accept the result decently. Professions of general public zeal and of particular concern for the welfare of the profession cut more ice when the issues are raised by persons less obviously interested than are Messrs. Tait, Holt and Rees in the present case.

I am sure that I speak for the rest of the younger men who were invited by King's College to participate in this competition when I say that we valued the invitation because it gave us just that kind of opportunity and recognition which we need and which so rarely comes our way. I at any rate want to dissociate myself from any criticism of the conduct of the competition. W. NASEBY ADAMS.

Strand-on-the-Green Wall.

SIR,—I was amazed to read in your issue of November 23 that the Art Standing Committee of the R.I.B.A. had thanked the Chiswick Council for conforming to their wishes in regard to the new river wall at Strand-on-the-Green. I take the following paragraph from the *Journal of the R.I.B.A.*, of July 14 last:—

"Members of the R.I.B.A. Art Standing Committee accordingly attended a meeting at the site, and then discovered that the whole of the foundations of the new section of walling at present being dealt with was actually in position, and a fairly long stretch of concrete walling almost completed, faced with rubble walling of a most mechanically uninteresting kind entirely out of harmony with its surroundings. The Institute's representatives pressed that the exposed portion of the wall still to be completed should be faced with old bricks of the character shown in portions of the existing adjacent river walling and in the very charming houses lining that part of the river, and should be finished with a thin, plain stone coping, also of the character of the work in the vicinity. It was understood from the Surveyor to the Council that they had a quantity of old bricks in store that could be used, and after discussion the Chairman of the Council and other members attending *agreed that this change in treatment of the wall should be arranged for.*"

The wall as executed is of the same mechanically uninteresting rubble. The stone coping is clumsy with only a slight projection on the river side, and none on the walk side. The wall is by no means almost entirely hidden, but is, on the contrary, very conspicuous.

The *Chiswick Times*, of November 16, rightly observes that the alteration in the coping "is the only point in which the Council has altered its original design, which is now so warmly approved."

Those of us in Chiswick who are striving against heavy odds to preserve what is left of our old-world riverside will never endorse the Art Committee's approval of a work which we consider poor and unworthy of the opportunity.

Chiswick. E. DACE BROWN.

The Architecture Club.

SIR,—Architecture is so noble and representative an art that the sentimental attributions which are sometimes given to it, as those who were present at the last dinner of the Architecture Club may have realised, are somewhat akin to "painting the lily," and with rather cheap colours. These daubers and decorators of architecture are really not its best friends; flatterers rather of that vain invention, the "mistress" art. The arts are seen best to grow out of and through each other, and develop as a whole. There is no first or last in art. Architecture is greatest when not too conscious of itself, and the inflated attributions of after-dinner orators designed to raise it to a higher plane than poetry, music, painting or sculpture, are not only apt to raise a smile, but reveal their ignorance of wherein its true greatness lies. Architecture is not well served in such bolstering, and I recall something about "good wine"! Architecture has been described as "the gentlemanly profession"—horrible phrase—in contradiction, no doubt, of the more provincial, uncouth and parlour qualifications of music and poetry, painting and sculpture. How much better than all this to let the art speak for itself, and so withstand the challenge of those who find only a quarter of the artist in the whole of the architect.

Does it not increase the feeling of the danger to art of the very means through which we seek to promote it, forgetting that we cannot add one cubit to its stature by all our organisation and oratory, though it may appear to add to our own. We have grown so much into the habit of belief that large membership, publicity, dinners, and much official activity will best water the garden of beauty, that we take it now for granted—but does it do so? May there not be some misunderstanding of the nature of art in such reliance on it? The most respectful of individuals may even feel a doubt in reading an account recently given of the great expansion in manifold ways of the R.I.B.A. Until reading of it I had not realised that this disaster had already overtaken architecture, and I wondered whether all this gregarious sort of protective fostering, with its registration enterprises, might not yet prove the grave of such encouragement of architecture. ISIS.

MR. E. STANLEY HALL, F.R.I.B.A. (President), occupied the chair at a general meeting of the Architectural Association held at No. 35, Bedford-square, W.C., on Monday last.

Accounts.

After the Minutes of the previous meeting had been read and approved, the Honorary Treasurer (Mr. L. S. Sullivan) presented the accounts for the session 1922–1923, which showed a deficit of £684 for the year. During the year a sinking fund of £12,000 had been formed, which would mature a year or so before the lease of the premises expired. During the year £600 of debentures had been paid off. He also announced that the Massachusetts University had offered an annual sum of 100 dollars for the use of the Association, and that it had been allocated for the purposes of the library.

New Members.

The following were unanimously elected new members of the Association :—

Mr. E. C. P. Allen	Mr. H. H. Goldsmith
Miss C. W. Preston	Mr. L. H. B. Roberts
Mr. S. H. F. Lloyd.	Mr. J. H. Bolton
Mr. G. C. P. Gough	Mr. J. Breakwell
Mr. R. T. Beck	Mr. H. Cholmondeley
Mr. A. B. Whittingham	Mr. H. J. R. Pease
Mr. F. J. Lander	Miss M. E. W. Colam
Mr. L. M. White	Mr. G. Pringle
Mr. H. A. Welch	Mr. E. S. Smith
Miss E. A. Swift	Mr. L. J. Collmann
Mr. K. Anns	Mr. A. W. Hastings
Mr. B. Coghlan	Mr. S. D. W. Timmins
Mr. G. A. F. Parry	Mr. R. S. De R. Harman
Mr. G. D. Smart	Mr. D. C. Saunders
Miss J. Fletcher	Mr. E. B. O'Rorke
Mr. E. G. Gardner	Mr. A. V. Booker
Mr. H. T. Rix	Mr. D. H. Davies
Mr. N. Bomer	Mr. K. S. Tayler
Mr. A. W. Warland	Miss A. J. Cooke
Miss B. Scott	Mr. A. W. G. Lowther
Miss D. E. Spencer	Mr. E. I. B. Jeffcott
Mrs. B. Dower	Mr. G. D. Shields
Mr. K. J. R. Peacock	Mr. E. G. Gillick
Mr. L. F. R. Coote	Mr. A. T. Bradford
Mr. C. W. Sully	Mr. J. R. Moore
Mr. J. H. Watkins	
Miss F. V. J. Barker	

Six nominations for election were announced.

THE STUDY OF OLD BUILDINGS.

MR. J. A. GOTCH (President of the Royal Institute of British Architects) then gave an address on "The Value of the Study of Old Buildings," illustrated with a number of lantern slides depicting the different periods of architecture, woodwork, stone-carving, &c. He said while a great advance in the methods of architectural education had been made during recent years in some respects, he hoped there had not been a backsliding in others. He had heard it hinted that the study of old buildings was not looked on with such favour nowadays as in the past, and that the study of Gothic work was being neglected. But he was fully persuaded of the value of studying old buildings, and particularly Gothic work. Since he took up sketching old work the practice had been a pleasure to him every day. It had the advantage of getting one into all parts of the country; or if business or pleasure took one on trips to fresh parts of the country some very pleasant hours could be put in with a sketch book. Measuring and sketching buildings helped the student to learn for himself, and in his opinion that was better than being taught by even the most able teachers; he was sure that what one found out for oneself was retained in the mind more permanently than what one learnt from books. He believed nothing was more useful in designing buildings or adjuncts to buildings than to see a model of them, and in the ancient buildings were to hand the most admirable models. The object of architectural sketching was not primarily to make a picture for exhibition, but to convey information of how things were done and how they could be done again. He had nothing to say against pretty pictures, which exercised a very special kind of talent, but in his view the real object of architectural sketching was to get at the heart of the building or object sketched and see how it had been executed in the past and to judge the effect of the work that had been done in the past by someone else. He thought it quite impossible for even the most enthusiastic person to evolve in a moment a new style of architecture. The whole of architecture hitherto had been a process of evolution, and that was one reason why he could see no beauty in and no future for the cubist school.

In conclusion, he said heraldry was a subject of the greatest interest to architects. The subject was not so difficult as might be supposed, and with the aid of a simple book on heraldry it could be mastered fairly easily. Nothing was so good for studying the subject as a series of tombs, and nearly all over the country tombs could be found with the same sort of angels holding the same sort of shield in the same sort of niche. He knew of no art which so well led one to study the vigour of line. Some of the heraldry was extraordinarily interesting; the same sort of animal which occupied a long and narrow space on one occasion would be found in a square space in another example, but the skill of the artist and the vigour of the drawing had managed to fill both spaces properly with the same device. Those who wanted to spend their holidays with a sketch book could find an enormous variety of work of a simple kind all over the country.

THE CHAIRMAN proposed a vote of thanks to the lecturer, and said they were very pleased indeed that the President of the Royal Institute had been able to find time to address the Association. It was thirty-six years ago since Mr. Gotch was President of the A.A., and he was the fourth President of the A.A. who had passed on to be President of the Royal Institute. He thought architects who built so much in the Renaissance also loved the old architecture when they got away to see the charming examples of past architecture with which this country abounded. For better or for worse, it had been judged that such work was not applicable to the present time, but it was for present-day architects to see that modern architecture was as suitable for the present as was the glorious architecture of the past in its own time. The architect who thought he could design a building like nothing that had gone before must be a most arrogant egotist. After all, the Parthenon was designed in a style which had been running for many centuries: the Taj Mahal was a typical example of that type of Mogul architecture. Old buildings could be studied in two ways: they could be studied archæologically, but architects should also endeavour to make them live—to find out what relation the old buildings had to the problems of the present day. The fundamental problems of building were the same from the beginning of time; the provision of a weather-proof wall and roof on sure foundations, with holes to let in the light and to permit people to get in and out. Those fundamental requirements had to be studied in connection with the conditions which affected them at the time—conditions of climate, and sunshine, and materials; of traction, political conditions, &c., a stable or an instable government, and, perhaps more important than all, the ideals and beliefs of the people.

MR. ARTHUR KEEN, F.R.I.B.A., (Hon. Sec., R.I.B.A.) said in the days before the architectural schools it was not so much a matter of being taught as of learning for oneself, and that learning was chiefly obtained by the study of old buildings. At that time nothing was regarded as so important as the study of old work, and those who practised it successfully became good architects. He did not know what the education of Street, for instance, consisted of except diligent sketching and measuring. It was the accepted method of study, and it produced very good results indeed; whether those results were comparable with the results to be achieved by present methods of education remained to be seen, but the older methods were not to be thought lightly of when one thought of the results. However, if men with an aptitude for study were put through a proper scheme of education, it could not fail to raise the standard of their future work in a very marked degree, and the value of school training would be apparent in the general increase in the quality of work in the coming generation. He thought it was the duty of every architect to know all about Gothic work, whether they practised in it or not: it was a matter of the history of the country.

MR. GILBERT JENKINS said the A.A. School did encourage the students to sketch and measure old buildings.

MR. PHILIP TILDEN emphasised the value of sketching from a purely historical point of view. Many of the City churches which were now threatened with demolition had never been measured, and he suggested that architectural students should consider it their duty to sketch and measure all old buildings which were threatened with demolition, so that a proper record would be left for posterity. He said in the north of England he had recently seen one of the most beautiful houses ever built being pulled down, and fire-places of William and Mary's time had been hacked down with pickaxes.

MR. KEEN pointed out that all Wren's churches were measured by Clayton in 1848, and there was a copy of the portfolio containing them in the A.A. library.

In replying to the discussion, the LECTURER said the methods of teaching at the A.A. Schools were admirable, but he thought the students should supplement what they learnt at the school with what they could learn themselves by sketching and measuring old work. He urged them, however, not to trust slavishly to their sketchbooks, for there was nothing more annoying than to see a new building and recognise features from other buildings.

MEETINGS.

FRIDAY, *November* 30.

Glasgow Architectural Craftsmen's Society.—Dr. W. Carrick Anderson on "Stone Decay, Its Causes and Treatment." 7.45 p.m.

TUESDAY, *December* 4.

Liverpool Architectural Society.—Mr. H. A. Welch on "Our Clients and Ourselves, and Possibly Other Thoughts."

WEDNESDAY, *December* 5.

Reading Society of Architects.—Mr. W. E. Vernon Crompton on "The Renaissance and Modern Point of View." At University College, Reading. 8 p.m.

L.C.C. Central School of Arts and Crafts.—Sir Banister Fletcher on "Origin and Evolution of the Ionic Order." At Southampton-row, W.C.1. 6 p.m.

Royal Archæological Institute.—Mr. A. Oliver on "Some French Abbeys and Cathedrals." At Burlington House. 5 p.m.

Leeds and West Yorkshire Architectural Society.—Professor C. H. Reilly on "New Buildings in Regent-street and the Strand." At Philosophical Hall, Park-row. 7 p.m.

Society of Antiquaries.—Mr. E. T. Leeds on "An Anglo-Saxon Cremation-burial in Asthall Barrow, Oxon." At Burlington House, Piccadilly, W.1. 8.30 p.m.

A CENTURY OF ARCHITECTURE IN VIENNA.

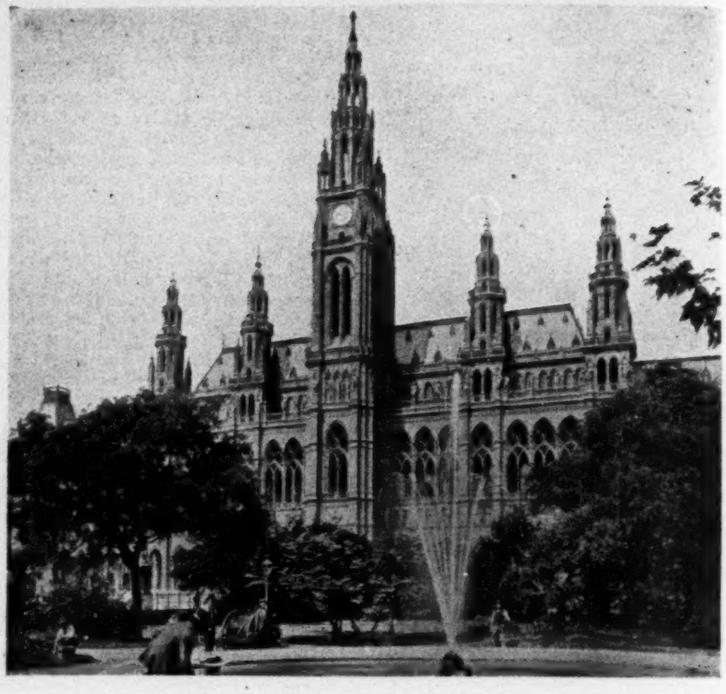
By H. V. LANCHESTER.

In wandering through the well-planned and spacious city of Vienna one receives an impression of ordered dignity and studied effects such as is only to be equalled by that great prototype of western capitals on the banks of the Seine. The vistas and massing of the latter are emulated by the groupings made possible when the Ring Strasse of Vienna was constructed through the wide glacis of the fortifications during the years following 1857.

No comprehension of Vienna is possible until this feature of its history is clearly recognised and its aspect prior to that date visualised. We find conditions which are without parallel elsewhere on anything like so extensive a scale—namely, a compact and intensively occupied central city, separated by a belt of half a mile in width from a ring of busy and wide-spreading suburbs which had begun to develop some two centuries previously.

In order to appreciate clearly the architecture of Vienna it is of first importance to understand its growth, and the two accompanying plans of Vienna before and after the formation of the great Ring Strasse will give a broad impression of the salient feature in this.

Without a clear recognition of this salient feature Vienna would remain a puzzle to anyone wandering through its streets, for the reason that after completing perambulations in the central city he emerges from it into surroundings so spacious and obviously modern that he will inevitably assume the growths beyond to be still more recent. Instead of this, on travelling outward, in almost any direction, he finds himself plunged once more into the Vienna of the eighteenth century, appearing in its general character more or less contemporary with the heart of the city, possessing important churches and great palaces, built in the Baroque manner of the period and with long radial highways and formal planning between them all solidly built up in the style characteristic of their date. Once given the clue, all becomes clear and obvious, but without it the solution would take long to arrive at.

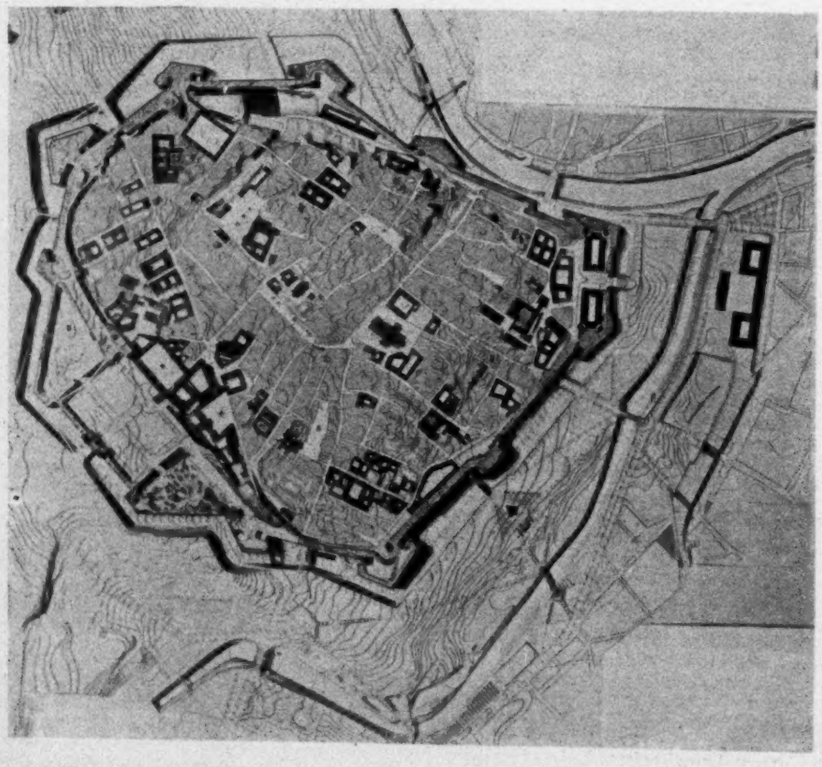


The Rathaus.

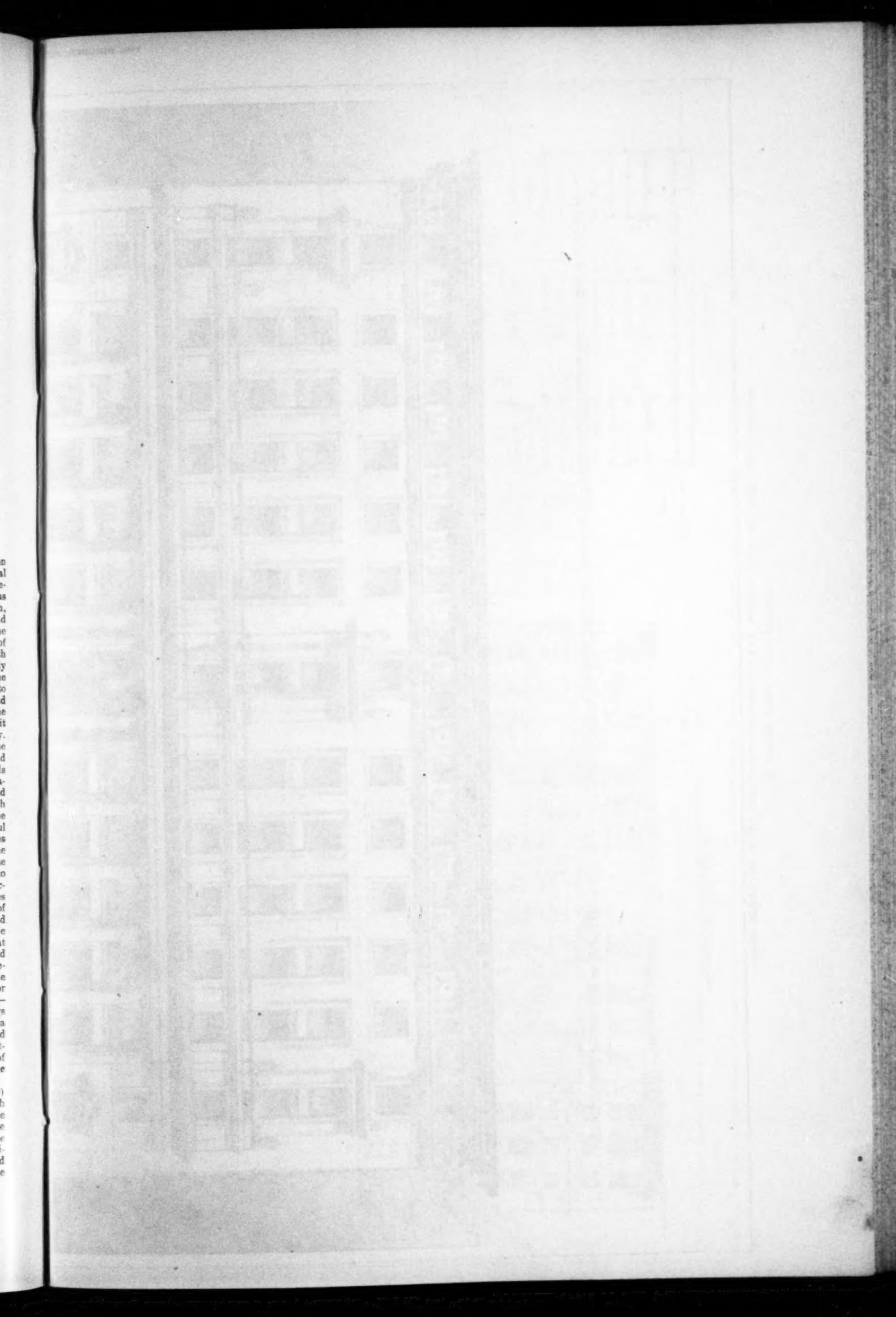
Not only have the special conditions of growth affected Vienna in the mass, but their influence has also been manifested in the architectural treatment of its buildings, and thus, in dealing with this aspect, it was impossible to omit these very brief notes on the growth of the city as an introduction to the subject.

Prior to the formation of the Ring Strasse the course of architecture in Vienna had been more traditional than in most Continental cities. The great undertakings of the previous century, carried out in a vigorous Baroque manner by Fischer von Erlach, Lukas von Hildebrand, and their pupils and successors, had so strongly determined the character of the place that the revival of Greek architecture at the end of the eighteenth century left Vienna almost untouched. Only the Greek temple in the Volksgarten and one or two minor efforts in this direction are to be noticed, while the general course continued the Baroque tradition, only eliminating the more extravagant elements and drawing it somewhat towards a more academic severity. This might be termed the first period of the century with which we are dealing, and had Vienna at that time possessed within its walls a strong school of architecture, this "Academic Baroque" might have formed a good starting point for future developments. Such a school was, however, lacking, and when the formation of the Ring Strasse, and the skilful planning linked up with it, provided a series of magnificent sites such as has fallen to the lot of no other city, the incentive to fill these sites with worthy buildings was bound to induce an extraordinary activity in architectural design, and we find as a result a series of buildings displaying a very high quality of artistic skill at every point as we circle round the old city. Yet it is impossible for the architect to feel the unalloyed satisfaction that such an achievement should evoke; his mind reverts to Paris, and to the consistent development of design there through almost the whole of the nineteenth century; he may—or may not, according to his temperament—regret that in lieu of a series of buildings carried through with a single dominant idea as to the meaning of architecture interpreted by the mentality of the age, he finds a veritable museum of the architectural forms of expression of all types recognised by the academies of that period.

The Burg Theatre (Semper and Hasenauer) perhaps comes nearest to the manner which would harmonise Viennese traditions with the modern spirit; but apart from this we take in 1860 a sudden plunge into the second phase of our period, and into a pronounced eclecticism which made a clean sweep of the old traditions, and presented Vienna with the

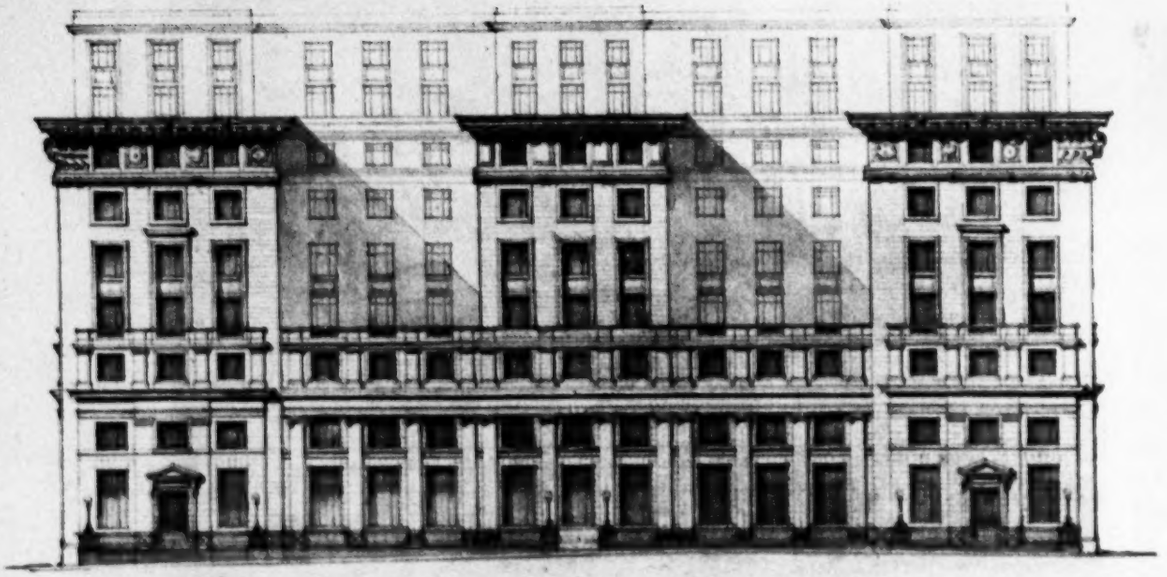


Vienna in the Eighteenth Century. (Fortifications removed 1857.)

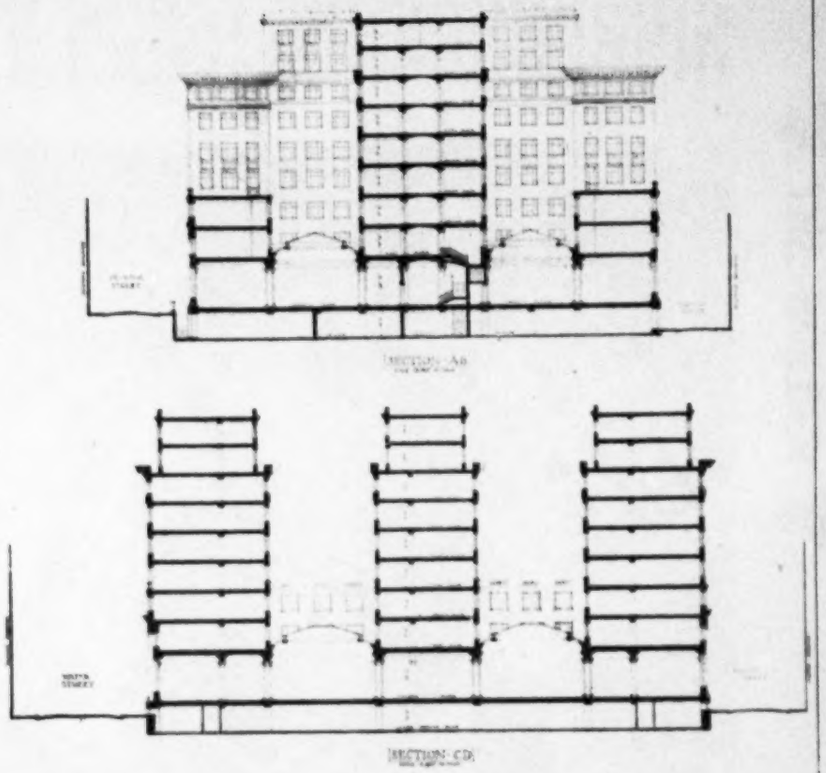


·WATER·STREET·ELEVATION·

Scale ⅛ths equals 1 foot.



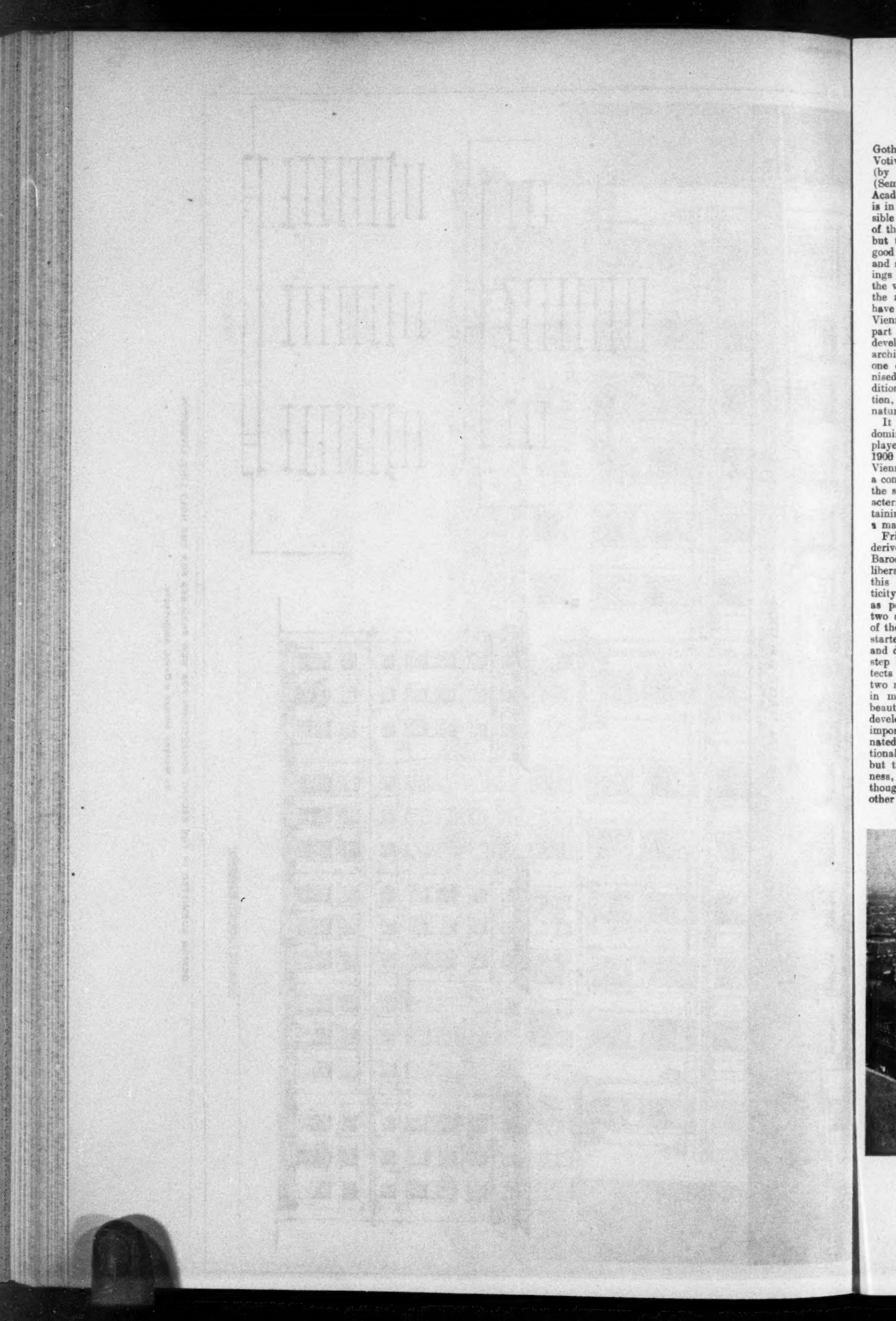
FENWICK STREET ELEVATION



SECTION C.D.

DESIGN SUBMITTED IN THE RECENT COMPETITION FOR NEW PREMISES FOR THE HOLT LINE, LIVERPOOL.

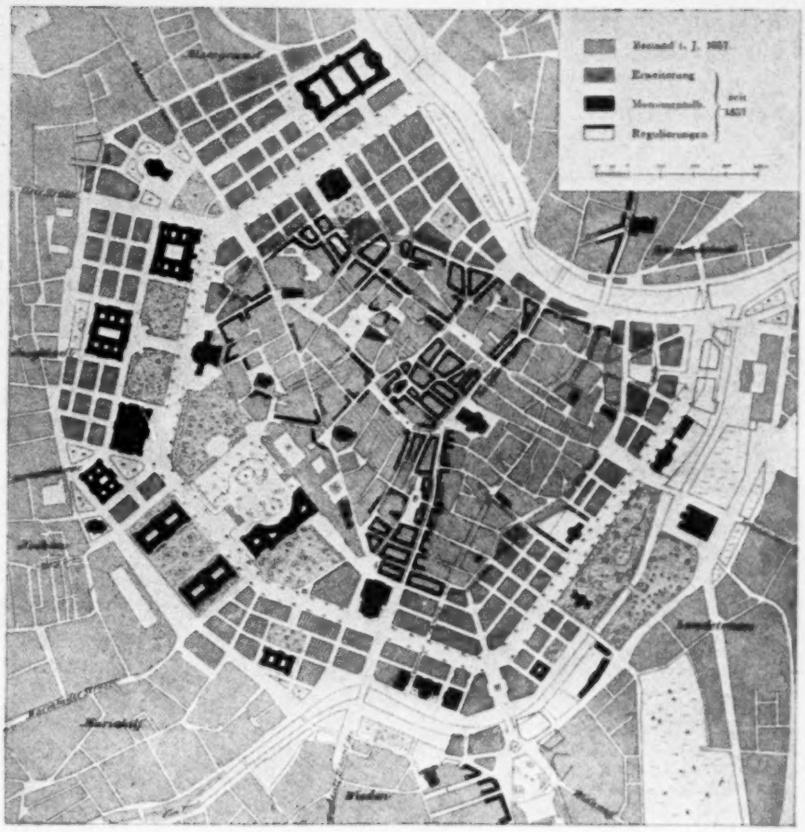
BY MESSRS. MEWES & DAVIS, ARCHITECTS.



Gothic Rathaus (Friedrich von Schmidt), the Votive Church, the Greek Parliament House (by Theophil von Hansen), the museums (Semper and Hasenauer) and university in Academic Renaissance, while the Opera House is in a form of Renaissance which it is impossible to define. Some of the other buildings of the period are scholarly and others are not, but the position is to some extent saved by good massing and by the relative simplicity and steadiness of the masses of private buildings which fill in the less dominant sites. On the whole, the claim may fairly be made that the magnificence of the Ring Strasse would have been materially enhanced had the Viennese school of architects during the latter part of the nineteenth century been able to develop a uniform and consistent ideal in architecture instead of seeking expression in one or other of the styles which are recognised as the outcome of various specific conditions, and which, when placed in conjunction, must necessarily emphasise the illogical nature of their employment.

It is probably due to the fact that the dominant electicism of this period was displayed in such an obvious way that towards 1900 there was a movement towards a definite Viennese style, not entirely uninfluenced by a contemporary movement in Germany, but at the same time possessing the distinctive characteristics of lightness and grace, while retaining in the hands of the late Otto Wagner a marked severity of form and line.

Friedrich Oman, as his studies show, derived his art more directly from the Baroque tradition, but, except where deliberately repetitive, he has entirely recast this and evolved a technique of great plasticity, bringing the art of architecture as near as possible to that of the sculptor. These two artists may be regarded as the pioneers of the modern Viennese school, and they both started from a strictly traditional standpoint, and developed their highly individual methods step by step from this. The younger architects owe a good deal to the efforts of these two men, but their example has not resulted in mere copying, and while their sense of beauty has not been surpassed, more recent developments are influenced by the increased importance given to a form of design dominated by structural methods. To the traditionalist the results sometimes lack beauty, but there is no doubt of their logical soundness, and the exponents of this school of thought can claim supporters in most of the other centres of art in Europe.

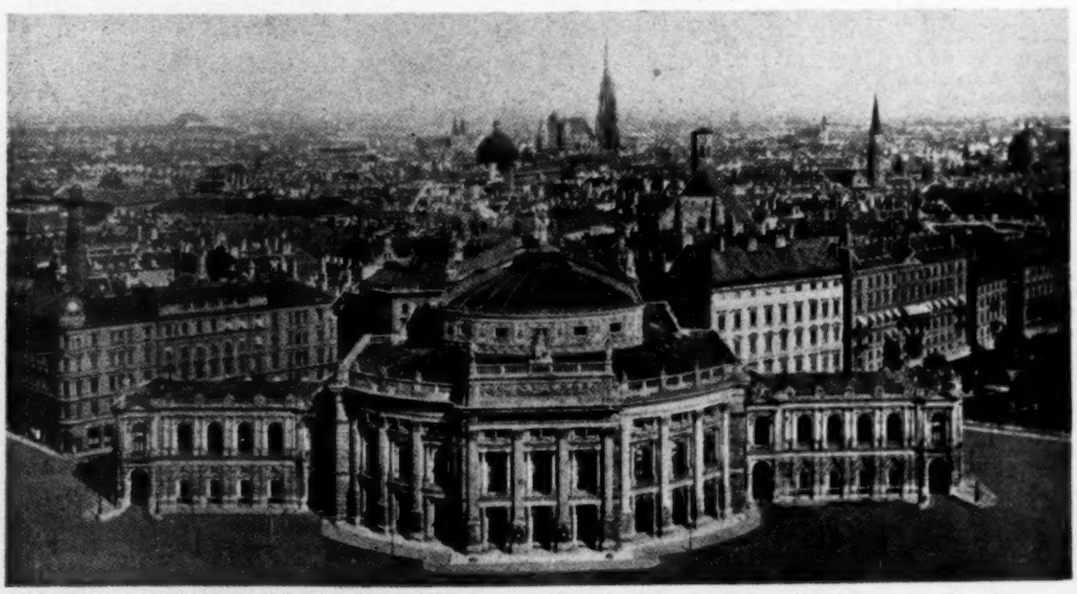


Vienna in 1880. The Ring Strasse.

As regards buildings for a definite purpose, the principles now inculcated seem to be leading to a very interesting phase in architectural design; but in purely symbolical or emotional forms they appear to leave their followers a little in the air, and to provoke experiments, many of which may be doubtful as representing the ideas intended to be conveyed. This is, of course, a danger to which every living art is liable to be exposed; it must away with methods that have become trite and hackneyed, while it is only to the rare genius that it is given to find a new mode of expression to replace these. The hope of the modern school in Vienna is that by experiment with new forms facility may be gained by means of which the genuinely imaginative mind may be aided in finding a mode of expression, but such a course must run the risk of encouraging many who may be capable of evolving sound work on recognised lines to attempt flights beyond their powers, and produce novelties that have no real meaning to justify the attempt.

Of course, but little has been built in Vienna during the past nine years, and there is no immediate prospect of important works in the near future; but such buildings as are now being constructed, mainly in the surrounding country districts, show a high standard of design is upheld.

Despite the departures in idea to be seen in the schools, most of the executed work shows its continuity with pre-war designs, and it can be claimed that the latest of the three phases of Viennese architecture during the century under review is still in process of evolution, and that, following the traditionalist period from 1820 to 1860 and the eclectic one from 1860 to 1890 or somewhat later, we arrive at a stage that, in so far as it is not typically Teutonic, can fairly be called a national one.



The Burg Theatre.

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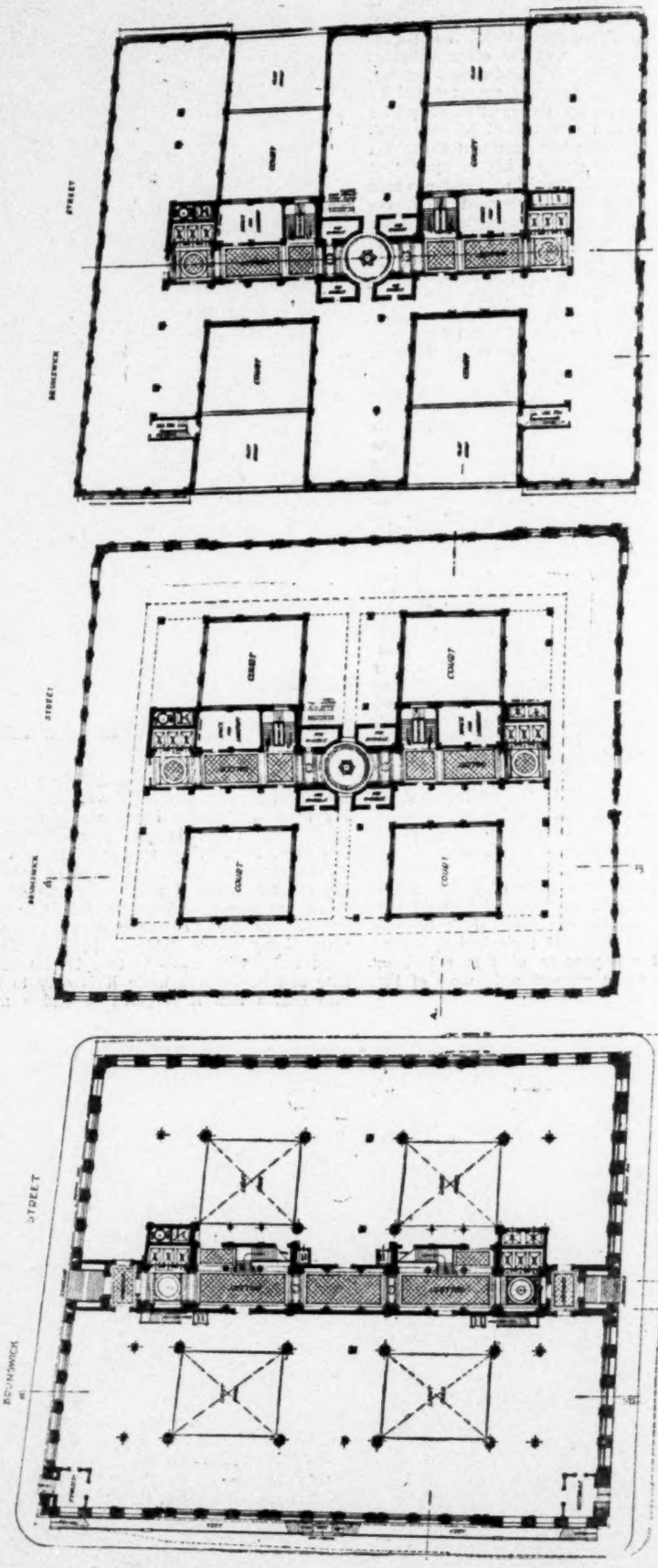

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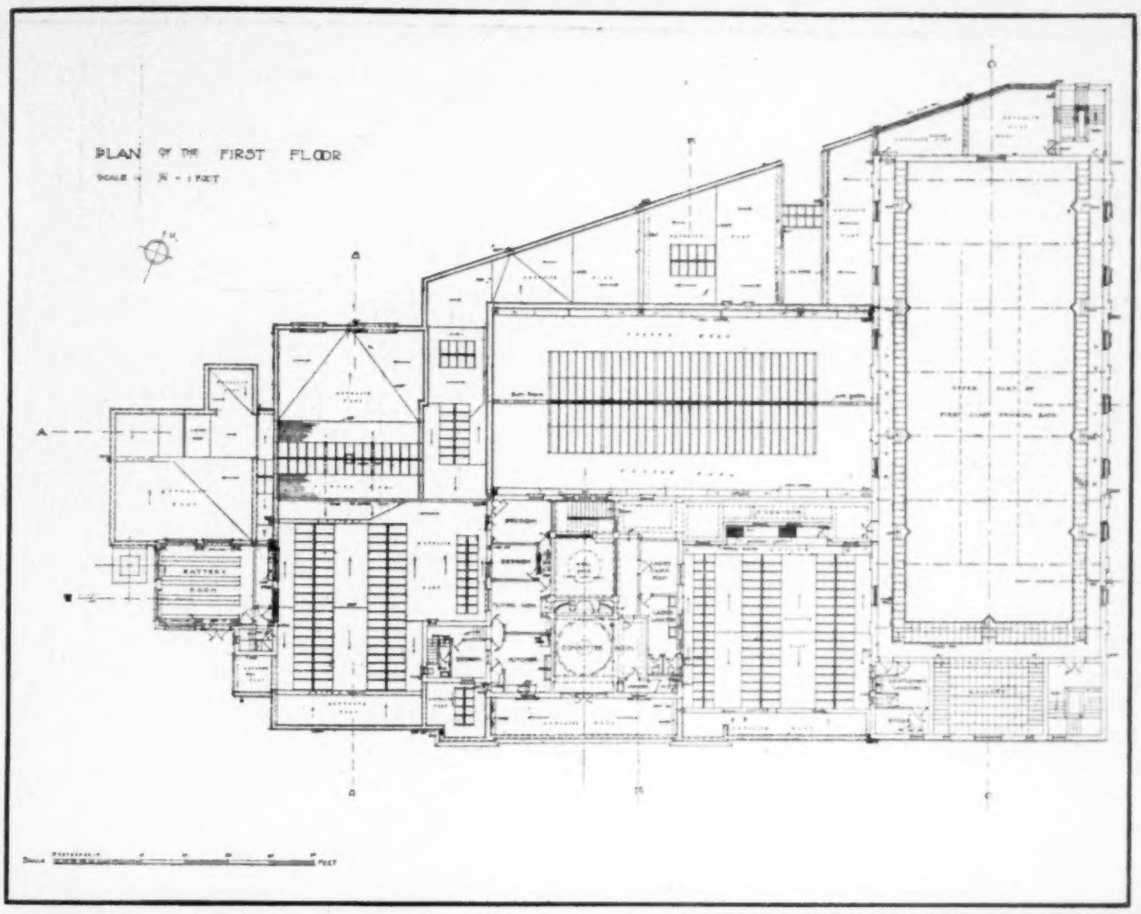

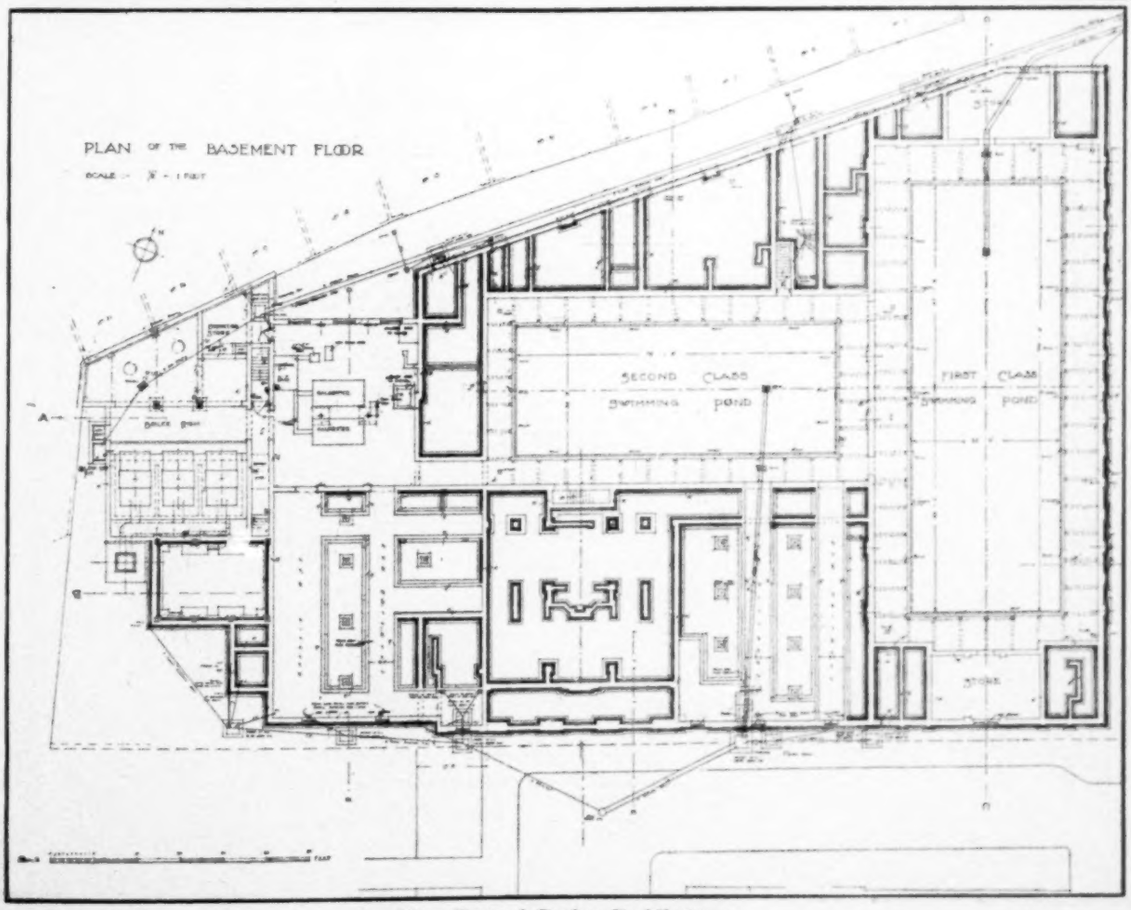

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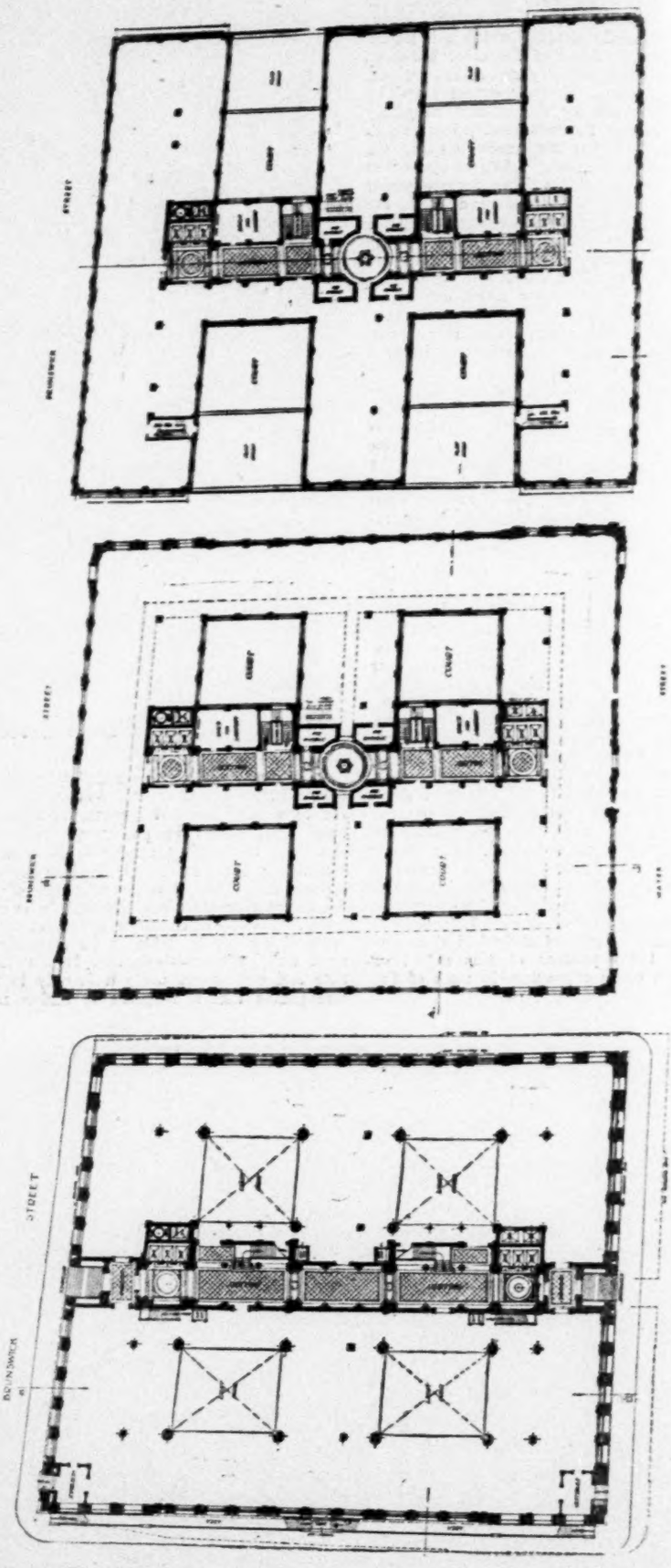

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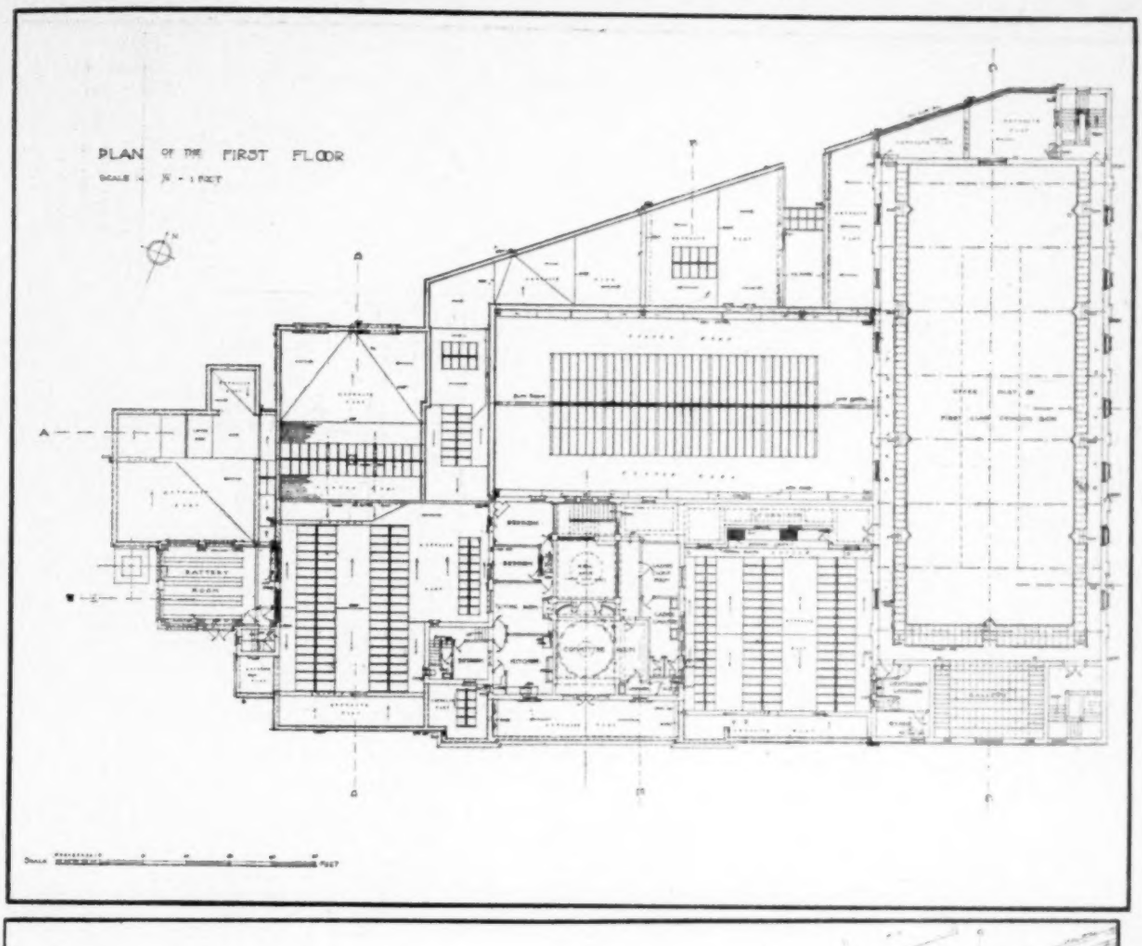

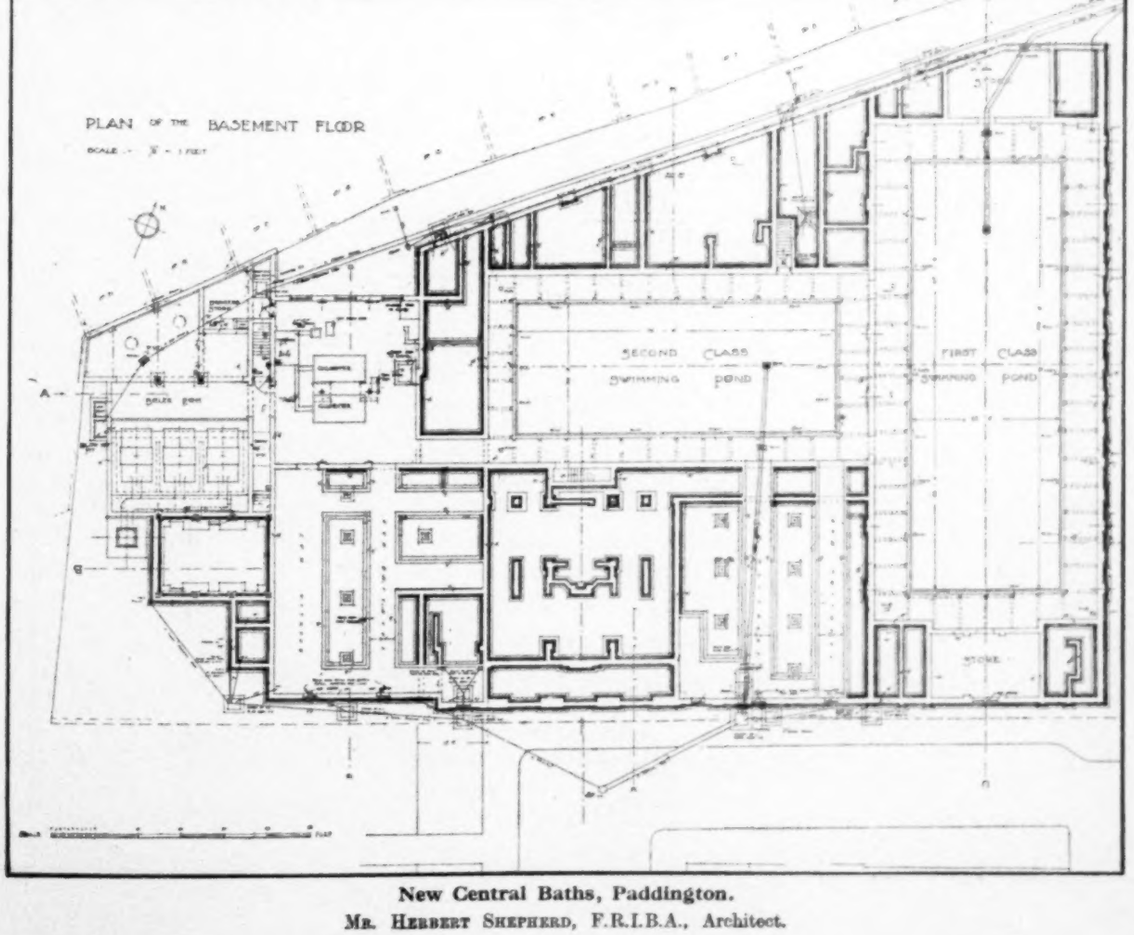

New Central Baths, Paddington.
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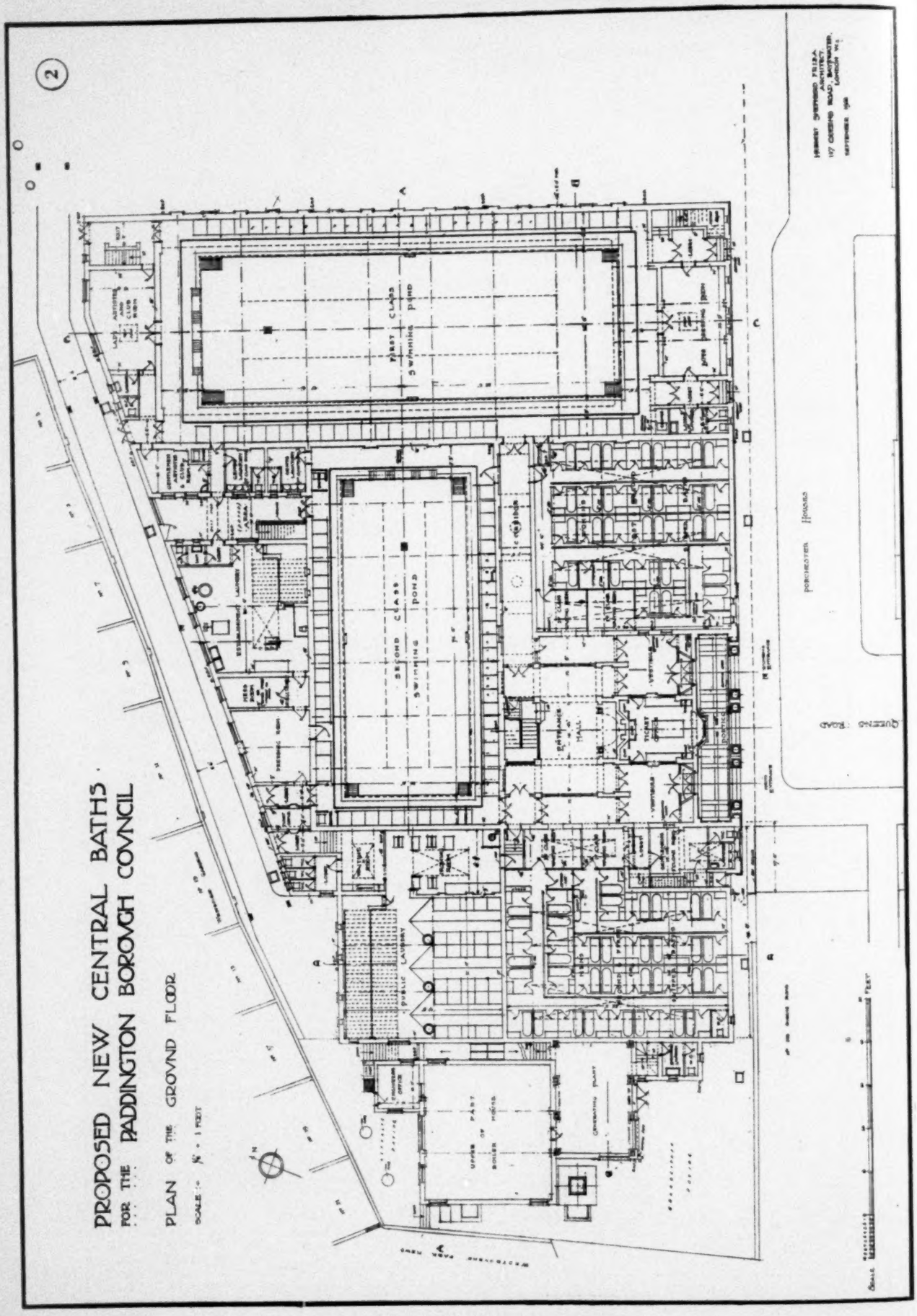

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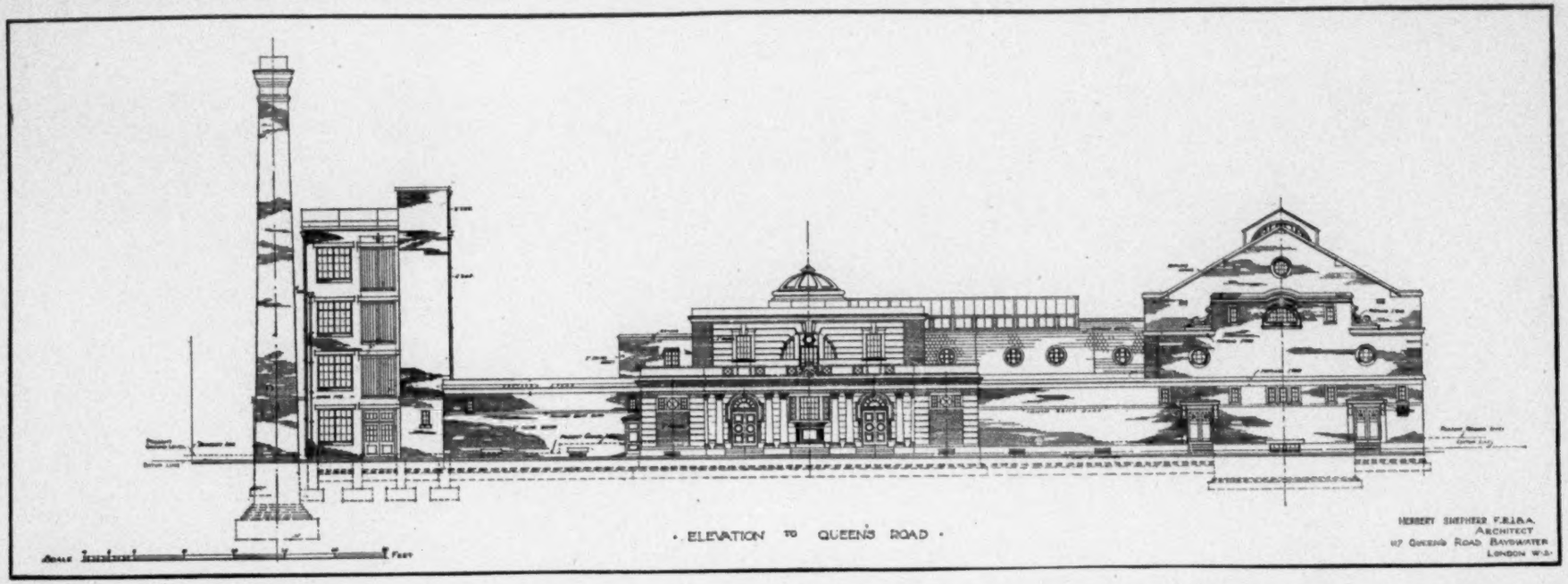

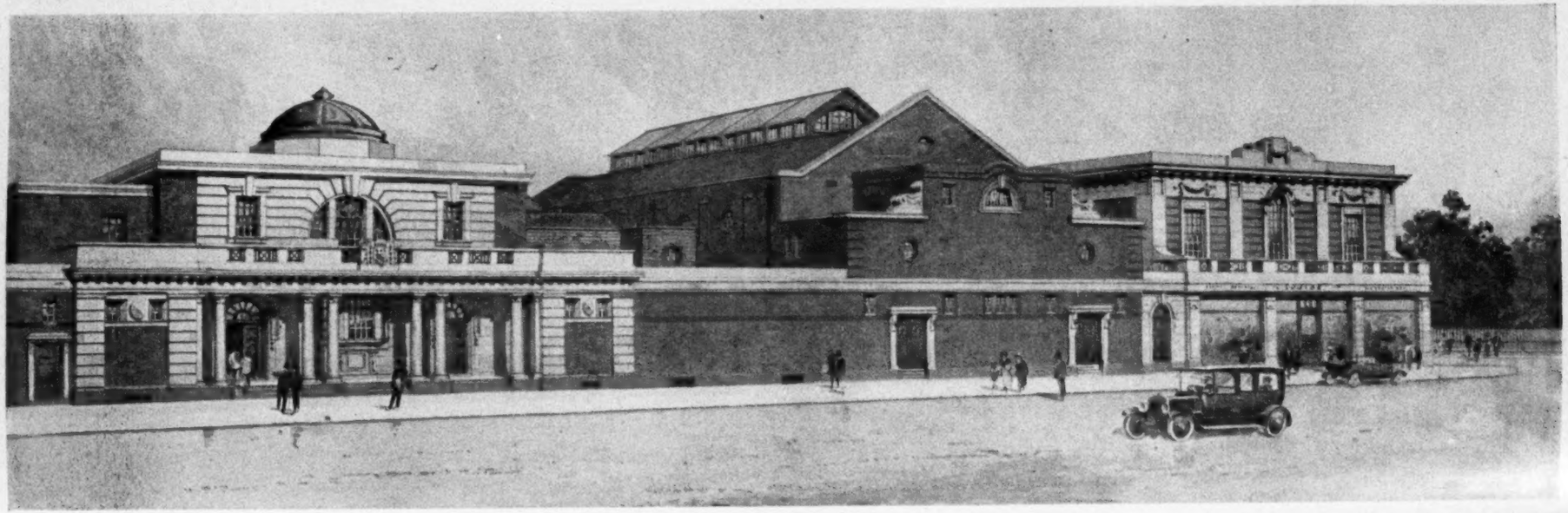

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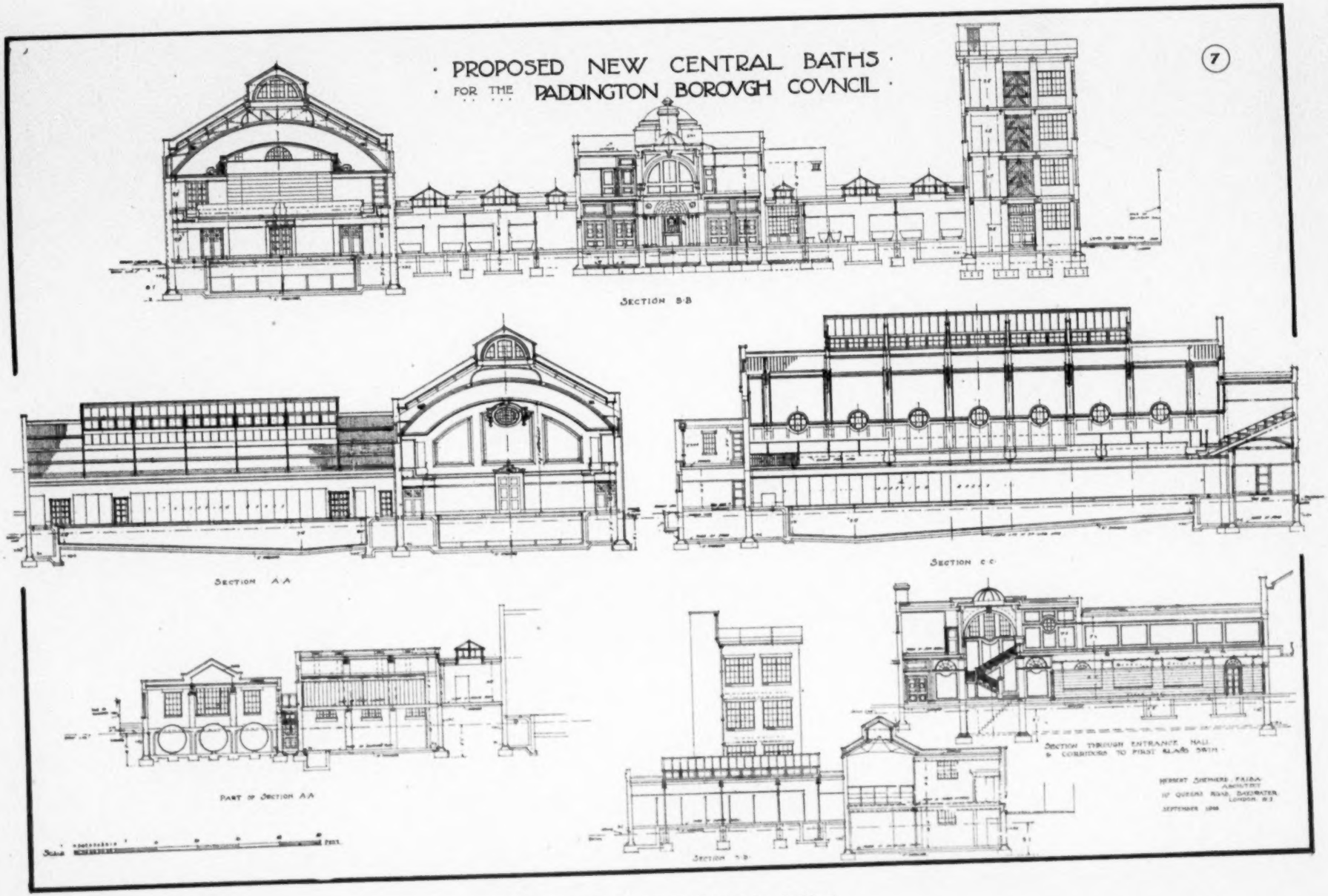
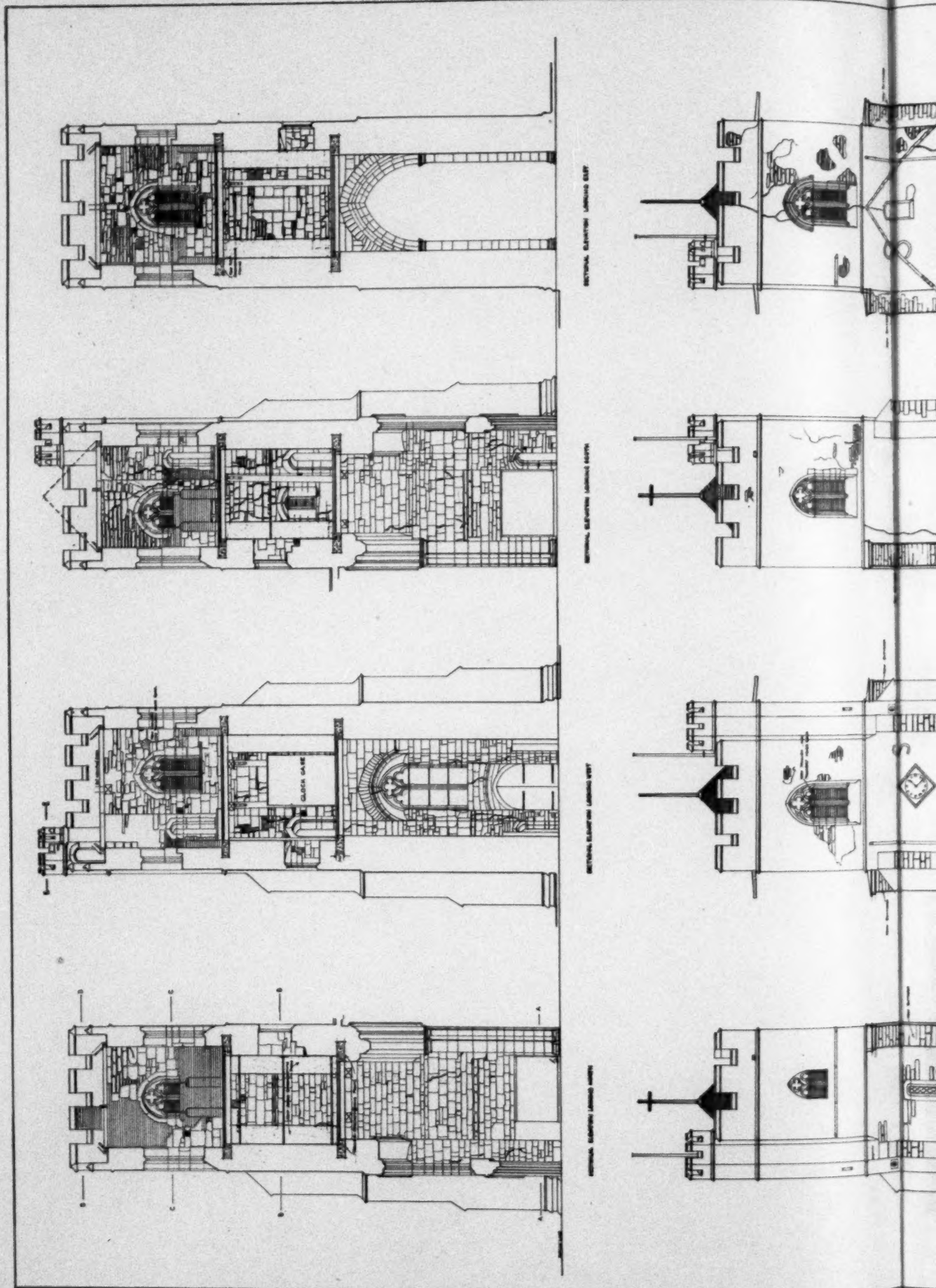
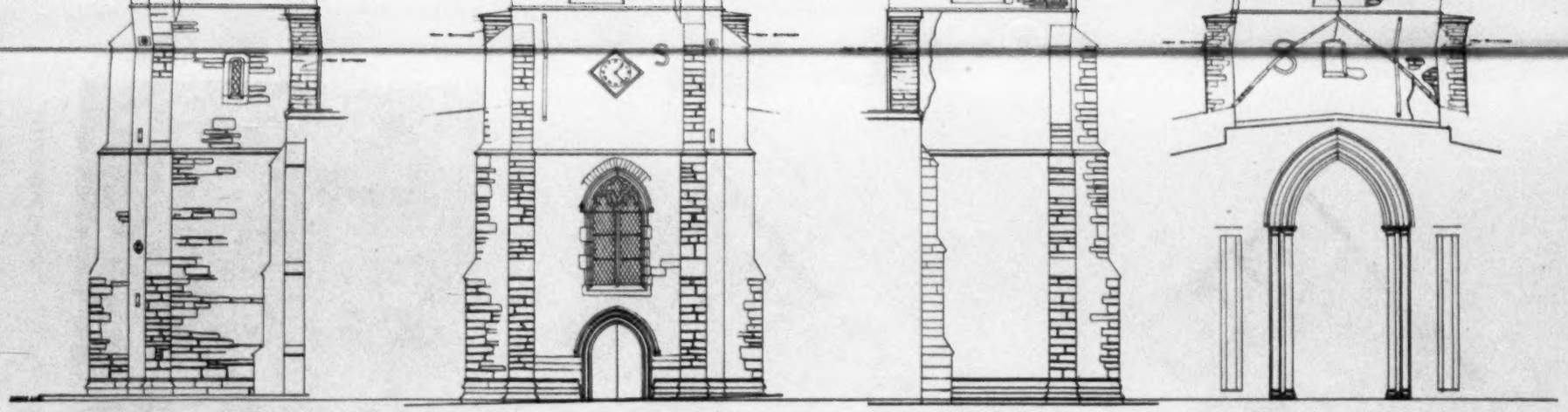

PROPOSED NEW CENTRAL BATHS
FOR THE PADDINGTON BOROUGH COUNCIL
7
SECTION B-B
SECTION A-A
SECTION C-C
PART OF SECTION A-A
SECTION THROUGH ENTRANCE HALL & CORRIDORS TO FIRST BLAND SWIM
SECTION D-D
HERBERT SHEPHERD F.R.I.B.A. ARCHITECT 17 QUEENS ROAD, BAYSWATER, LONDON, W.2
SEPTEMBER 1923

Mr. Herbert Shepherd, F.R.I.B.A., Architect.


CLOCK CASE

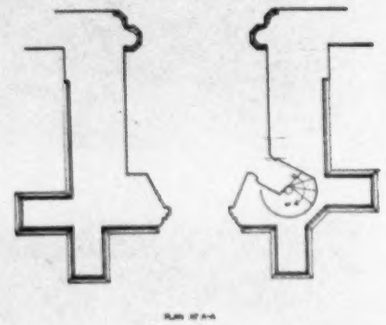


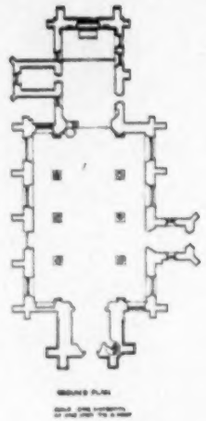
SOUTH ELEVATION

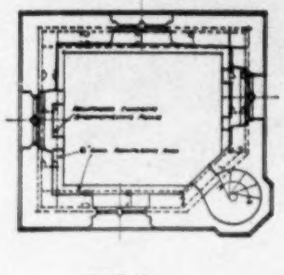
WEST ELEVATION

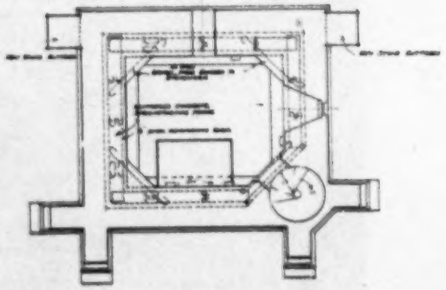
NORTH ELEVATION

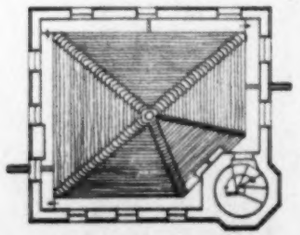
EAST ELEVATION







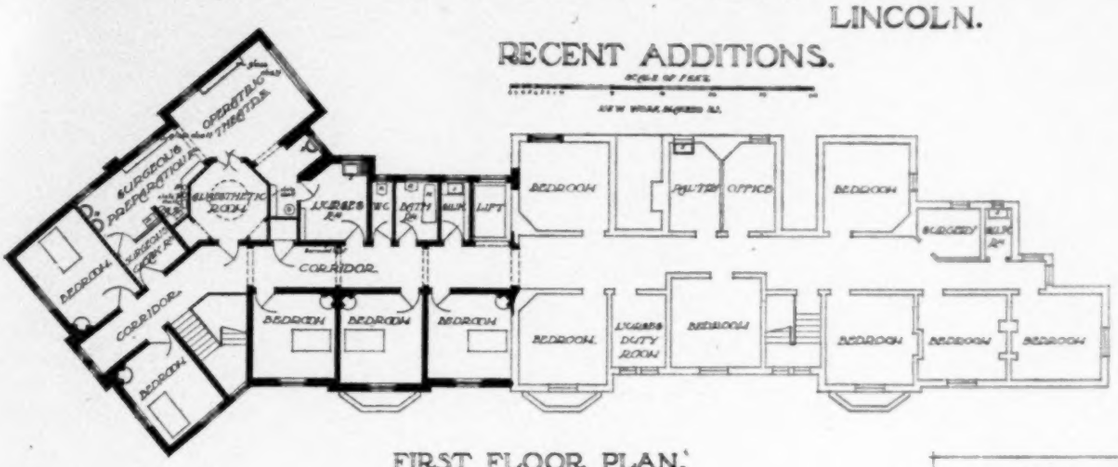




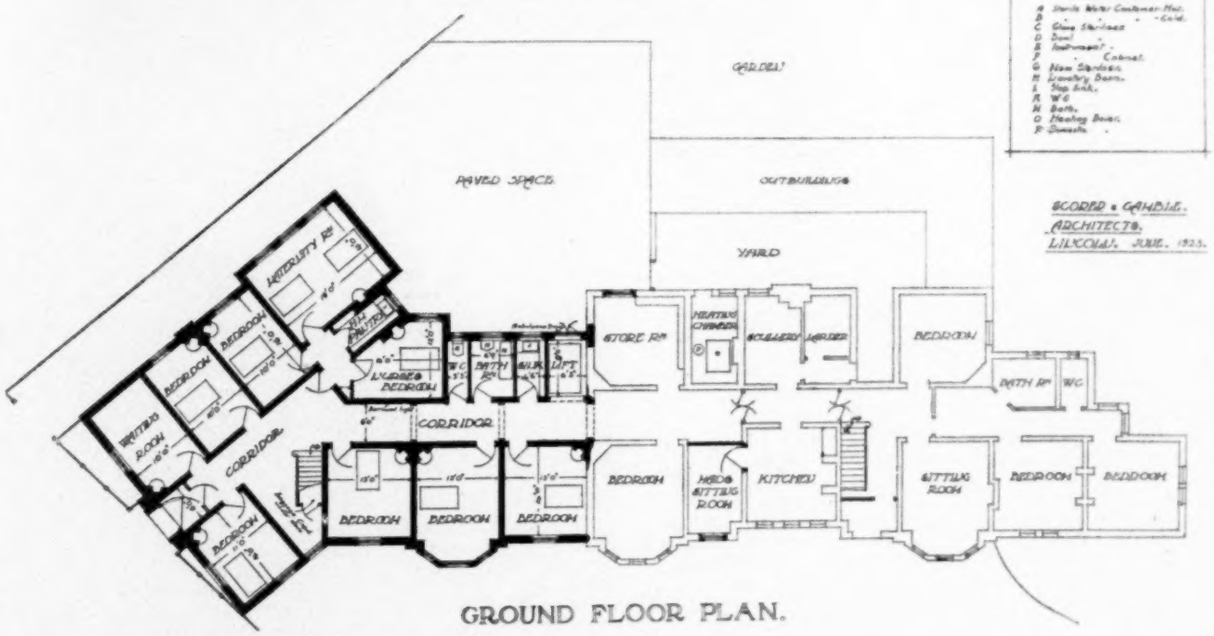
THE PARISH CHURCH, HARLINGTON. MESSRS. RICHARDSON & GILL, FF.R.I.B.A., ARCHITECTS.

THE BROMHEAD NURSING HOME. LINCOLN.

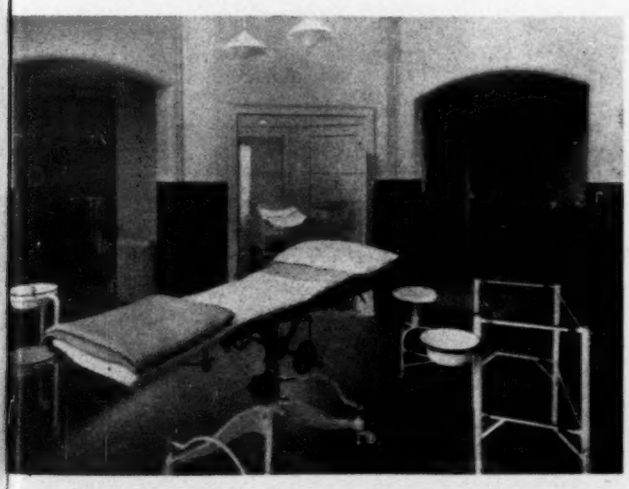
RECENT ADDITIONS.



FIRST FLOOR PLAN.



GROUND FLOOR PLAN.



VIEW FROM OPERATING THEATRE INTO ANÆSTHETIC ROOM.

OPERATING THEATRE.

MESSRS. SCORER & GAMBLE, Architects. (See p. 848.)

EXHIBITION NOTES.

TOWN PLANNING AT OLYMPIA.

WITH twelve thousand square feet of wall space and half an acre of floor Major Hardy, Syms has been able to arrange the most interesting exhibition of Town Planning at Olympia which has probably been seen in London. The whole exhibit is well schemed in sections, beginning with the Civic Survey (1), and showing (2) Town-Planning Schemes under Town-Planning Acts, (3) Road Forms, (4) London, (5) City Development, (6) Regional or Joint Town Planning, (7) Garden Cities, and (8) Parks, Playgrounds and Athletic Grounds. There should be few architects who would not be interested, and may we not say instructed, by a careful consideration of this accumulated mass of information. Much of it has been actually collected by Major Hardy-Syms from Hungary, Austria, Sweden, Germany, &c., and a review of what has been collected would show that we have much to study, admire, and emulate in what far distant cities have done. That this exhibition might have been larger and more comprehensive still, we do not doubt, but it is sufficiently up to date and vital to make it for us the most interesting we have seen.

The sequence of action following a civic survey may be well understood if the visitor to the exhibition follows the various sections in the order they have been placed. As an instance of the practical application of town-planning design, we may point to the clever plans and elevations which have come from the London University School of Architecture and the A.A. schools. A quite new type of building, called for by modern developments, is the Motor Charabanc Station, which was suggested as a subject to the schools, and has met with an admirable response.

In the space at our disposal this week we cannot do justice to an exhibition so full of interest. It was stated by a public speaker the other day that there was no plan of London. A contradiction is provided here by the fine exhibit of plans by the London Society, dealing with Stoke Newington, Bethnal Green, Stepney, Hackney and Islington, and plan of roads in and out of London by the organising secretary.

The study of town development is illustrated by a fine series of drawings of Manchester as it was, as it is likely to be, and as it might and should have been. A wonderfully interesting series of drawings shows how a beaver altered the history of the town of Newbury. There was a river ford over a thousand years ago where roads met, and where building had begun, but one day a beaver or beavers set to work and built a dam across the stream further to the east, so that in time its ledge formed a better crossing of the river than the ford, and thus after the formation of a Roman camp this became the centre of the present town.

Bath, Birmingham, Oxford, Bolton, Blackpool, Dundee, Lancaster, Rochdale, Leicester are all shown together in an interesting section of the exhibition. Ramsgate's sea-front as propounded by Sir John Burnet & Partners, and Messrs. Lancaster, Lucas & Lodge, occupy another section.

The map designed by Mr. Pepler, showing a system of notation for the plan of a town in regard to its various aspects of density of population, location of industries, &c., is a valuable contribution. A map of England and Wales, showing the town-planning schemes already projected, in operation, or hereafter necessitated, gives a vivid impression of how much there is to be done. And whilst all this is before us it is interesting to see in various sections how vigorously the subject has been already dealt with in other countries, in some cases with very marked success.

The model which shows a design for a new bridge at Charing Cross should be useful in showing what such a scheme could produce; perhaps some will find it attractive. There would certainly be good space for all-night shelters under the embankment arches of the bridge, which will also serve to cut off the present fine view up and down the embankment. The model suggests, apparently, giving the south side over to dull, severe-looking types of commercial buildings.

A floor model 220 ft. long and 20 ft. wide, of the Great West Road out of London, occupies one end of the Gallery, and perhaps the large scale helps one to realise the great extent of the work. There are 22 models of various kinds, of which the most interesting is Mr. Barry Parker's development scheme for Oporto. Other excellent ones are No.16, of the Flackwell Housing Estate (W. S. Grice, architect), showing a pleasant lay-out, Bourneville and Gothenburg.

The graphic illustrations of Bournemouth, Bellingham, Golders Green, Welling (housing), Marsh Green, Merton, Barking, Hampstead, Mitcham and Hendon, will perhaps seem rather lacking in quality and originality compared with Zurich, Gothenburg, Upsala, and other Continental examples, but most British citizens may well feel assured that in the expression of pleasing domestic feeling in architecture we have really nothing to learn from other countries.

A valuable volume might be compiled from the materials got together in this one exhibition, but books are only one of various methods for the spread of knowledge. What we should like to see would be a series of lectures in all our towns dealing with town planning treated in a summarised and popular form, so that the general public—the so-called cultured and the rest!—might realise what goes to the making of a beautiful, healthy and well-ordered city. How many are there who realise what has been done so well in Liverpool for the better arrangement of tram roadways (shown in a fine photograph at the exhibition), or what the system of transport fares and routes has done for Paris shown in a graphic map! Underlying or overlaying all the many activities which are necessarily associated with town planning, how many people are there who realise the sociological point of view? For our own part we frankly admit our already keen interest in this great matter of efficient town development has been stimulated greatly by this exhibition, which owes so much to the able committee in charge of it and the discriminating industry of its organising secretary.

BROMHEAD NURSING HOME, LINCOLN.

THIS building (see p. 847), called "The Red House," was erected from plans prepared by Mr. Wm. Watkins, F.R.I.B.A., in about the year 1887. It has been added to from time to time. The recent additions indicated in black on the plan were made in order to meet the growing demand for additional private nursing home accommodation. It consists of a waiting-room, five private wards, together with a maternity section, including maternity nurse's bedroom, and sanitary arrangements and lift on the ground floor; five more private wards and the operating theatre section, which comprises an anæsthetic room leading into the operating theatre, with the surgeons' cloakroom and surgeons' preparation room and nurses' preparation room on either side, and sanitary arrangements and lift form the first floor.

The plans of the theatre section were designed in accordance with the latest views on the requirements of aseptic surgery. The theatre itself contains only the absolute necessities, instrument cabinets and other equipment being kept in the subsidiary rooms. The surgeons' cloakroom and nurses' preparation room are shut off from the theatre by doors, thus ensuring the passage of the least possible amount of dust from the outside corridors into the theatre itself.

The walls of the operating theatre and surrounding rooms are finished in Portland and Parian cement and painted in enamel, the dado being dark green and the remainder white. The floor is dark green mosaic, this colour being chosen specially to throw up objects contrasted against it. The floors of the anæsthetic room and sanitary rooms are covered with doloment. The doors between the anæsthetic room and the operating theatre are solid enamelled doors, self-closing on rising butts, and are cut short both at the top and at the bottom, the former for ventilation and the latter to prevent the movement of dust. Special curtains and shades of opaque black material have been arranged for use in the anæsthetic room, which may be darkened for operations requiring the same. The ward floors are covered with "Battleship" linoleum stuck down to the concrete.

In addition to the low-pressure heating apparatus it was thought advisable to put small "Devon" grates in the different wards for ventilation and additional warming. The elevations, which are of a plain and simple character to harmonise with the original building, are faced with local facing bricks, and the roofs are covered with Rosemary tiles. The whole cost of the additions has been about £7,500.

Messrs. Wm. Wright & Son (Lincoln), Ltd., were the general contractors. Messrs. W. Gregory & Son, of Lincoln, the electrical engineers concerned, and the Brightside Engineering Co. carried out the heating work, the architect being Mr. Henry G. Gamble, F.R.I.B.A., of Messrs. Scorer & Gamble, architects and surveyors, Lincoln.

RENAISSANCE GARDENS AND TOWN PLANS.

FOLLOWING is a summary of the sixth of the series of lectures on Town Planning, given by Mr. Wm. Haywood, F.R.I.B.A., at Birmingham University:—

The influence of landscape architecture upon Renaissance town planning was more apparent in seventeenth-century France than in sixteenth-century Italy. Italian gardens favoured the hill side, and the prospect of great natural effects external to their boundaries. French gardens were horizontal, and were associated with distant landscapes, where these could be made to appear as part of an artificial design.

Le Notre, the greatest of French landscape architects, was responsible for the best French work between A.D. 1661 and 1700, including the gardens of Versailles, St. Germain-en-Laye, Trianon, Marly, and St. Cloud. Versailles was especially interesting, as it had formally-planned gardens on the west front of the Palace, and a formal planning of streets and buildings on the east; the composition in each case centred on the Chateau. The Place d'Armes, around which the Palace and town were grouped, had central and branching avenues, evidently inspired by the plan for the Piazza del Popolo at Rome, built eighty years before. This feature also reappeared in Germany at Karlsruhe (A.D. 1712), where the geometrical association of town plan, Palace, and Palace gardens—which Versailles uses with discretion—was carried to great extremes. Neither at Versailles nor elsewhere did any town planning appear in the seventeenth, eighteenth, or nineteenth centuries, which could compare with Wren's plan for rebuilding London in 1666. For spacious effect, and a utility suited to its own and later times, this plan stood alone, and there was no greater lesson to be learned from the history of town planning than the loss suffered by London from an absence of legal power at a time of great opportunity.

Paris—to which one's thoughts turned naturally when one thought of cities finely planned and adequately built—was the outcome of many apt adjustments, rather than of a comprehensive design. Her first move towards emancipation from mediæval congestion occurred with the use of her seventeenth-century fortifications as promenades, and their subsequent adaptation—when removed by Louis XIV—as tree-lined avenues. This sweep of avenues on the north bank of the Seine, known later as the "Grande Boulevards," was the first step towards modern planning in Paris. It was conceived 85 years after Fontana's work in Rome, and 10 years after Wren's plan for London. Paris had profited greatly by her successive enclosures.

THE ARCHITECTURE CLUB.

On Thursday last, at the Hotel Cecil, the Architecture Club held its fifth quarterly dinner. The chair was occupied by Mr. J. C. Squire, and amongst those present were The Hungarian Minister, Lord Riddell, Viscount Bury, Sir Frank Newnes, Sir Charles Walston, Sir Hugh Bell, Sir Theodore Cook, Sir John Hall, Sir Chartres Biron, Mr. Hope Bagenal, Mr. Oswald Barron, Mr. R. S. Bowers, Mr. Ewart G. Culpin, Mr. C. F. W. Dening, Mr. W. Reid Dick, Mr. W. McG. Eagar, Mr. A. Trystan Edwards, Mr. J. H. Elder-Duncan, Mr. H. M. Fletcher, Mr. G. Topham Forrest, Mr. W. A. Forsyth, Mr. H. S. Goodhart-Rendel, Mr. Edmond Gosse, Mr. E. Stanley Hall, Mr. H. Austen Hall, Mr. Stanley Hamp, Mr. Ambrose Heal, Mr. Lewis Hind, Mr. Charles Holden, Mr. Ralph Knott, Mr. H. V. Lanchester, Mr. Nathaniel Lloyd, Mr. Edward Maufe, Mr. Oswald P. Milne, Mr. Ian MacAlister, Mr. W. G. Newton, Mr. Paul Phipps, Mr. A. R. Powys, Mr. Howard Robertson, Mr. Charles Spooner, Mr. Philip Tilden, Mr. T. S. Tait, Mr. A. B. Walkley, Mr. John Walter, Mr. Paul Waterhouse, Mr. Trenwith Wills, Professor J. Hubert Worthington, Dr. Thomas Worthington, Major H. P. Maule, Mr. R. S. Bowers, Mr. Allan G. Wyon, and Mr. F. R. Yerbury.

After the loyal toasts, the Chairman gave a brief report of the progress of the Club. The progress had, he said, been very evident of late by the increased attention which the press and the public paid to architecture. The membership of the Club was increasing, and its sphere of activity was extending. They had received the support of the architectural profession and of the Royal Institute of British Architects, with which body the Club was co-operating in organising an exhibition of architecture at next year's British Empire Exhibition. That Exhibition would include photographs of a representative selection of the best buildings erected within the Empire during the past twenty years. A joint committee of the R.I.B.A. and the Club had been formed, and he hoped it would be possible to place the Press Committee of the Club at the disposal of the Royal Institute. The Club now had three sub-committees in working order: (1) the Press Committee; (2) the Lecture Committee, which would organise lectures on architecture in various parts of the country; and (3) the Exhibition Committee, which was organising the second Exhibition of the Club to be held in the Spring of next year. In future those exhibitions would contain sections devoted to the best architecture of the preceding twelve months, housing schemes, gardens, memorials, &c.

Mr. Edmund Gosse, proposing the toast of "Architecture," expressed the pleasure he derived from seeing beautiful buildings, and said that although he had travelled extensively no buildings appealed to him so much as the ecclesiastical buildings of France, particularly the Gothic cathedrals of the twelfth and thirteenth centuries in the north of France. France had splendidly preserved her memorials of the past. In the seventeenth and eighteenth centuries there was considerable opposition to the great Gothic minsters of France, and there was a danger that many of them might have been demolished, but that could not happen now because they were protected by legislation. It was a very serious thing that there was no effective legislation to protect architectural masterpieces of the past in this country, and the Architecture Club might do a great deal to protect the magnificent buildings which were now in danger of being lost to us through the pressure of industrial arguments, particularly a number of the City churches. Probably the City churches were not all as beautiful as Ely Cathedral, but they were all works of art and each one ought to be judged on its own particular merits. Never in the history of our civilisation had a beautiful ancient building been destroyed without it had been regretted afterwards. If one of the beautiful City churches were destroyed it would be gone for ever, and it was possible that the next generation, finding the building had beauties not now realised, would hold the present generation up to execration. It must be realised, however, that industrial necessities existed, and that every building was not worth preserving simply because it was old, but every movement to destroy an ancient monument should be carefully watched.

In responding, Mr. Paul Waterhouse, PP.R.I.B.A., expressed the pleasure he felt at the existence of the Club, whose aim was to blend together architecture and literature. There was much that literature could do for architecture, and no doubt architects could do something for literature.

The toast of "The Club" was proposed by Lord Riddell, who said it was a melancholy fact that there was no subject on which the general public had less knowledge than architecture. Very few of the public knew anything about the important buildings in the towns in which they lived, and fewer still knew anything about the architects who designed them. That ignorance was largely due to architects themselves, who were a very reserved body of men. So far as he knew no architect had yet been bold enough to put his name to a building he had designed. He was quite certain that architecture would never become popular, nor would the public take an interest in architecture, until architects took the trouble to advertise themselves more in the editorial columns of the press, by speaking, and in other ways. In addition to interesting the public in architecture he thought the Club might do good work by inculcating better business methods into architects. The system of treating architects as artists rather than business men had its defects. What frightened many people from building was the possibility of "extras," and it would be to the benefit of all concerned if a client were told exactly what a building would cost without the fear of any extras unless incurred by the client himself varying the design whilst the building was in progress of erection.

Mr. A. B. Walkley responded.

HARLINGTON PARISH CHURCH.

This is a well-proportioned building; the chancel measures 32 ft. by 16 ft. 10 in., with, north vestry; nave 55 ft. 8 in. by 18 ft., with aisles 7 ft. wide, and a characteristic porch; the west tower measures 9 ft. 4 in. by 11 ft. 7 in. internally. Both the nave and aisle are fine examples of early fourteenth-century work; the chancel is of slightly later date. There was no tower to the original design. In the fifteenth century the present tower was added and, without regard to constructional needs, was built against the west wall of the nave. The nave arcades are fine examples of their type, being tall and slender with moulded details; in this respect the work is similar to that at Houghton Conquest Church.

All the original windows have been removed from the aisles with the exception of one in the east wall of the north aisle. There are remains of a similar west window, now blocked. The uncusped sixteenth-century windows of four lights in the aisle, and elsewhere of three lights, have the character of early Tudor work.

In the fifteenth century, probably when the tower was added, the aisle walls were heightened, and low-pitched roofs finished with lead flats were put over the nave and aisles; the line of the high-pitched fourteenth-century nave roof can still be seen in the west wall of the tower. This portion of the nave wall is built of clunch and was evidently exposed to the weather for centuries, after the alterations were made. The exterior was repaired about ninety years ago.

In the chancel there is a three-light east window with flowing tracery of original date (probably *c.* 1345), flanked by fine contemporary gabled and pinnacled niches revealing the influence of Walsingham's work at Ely (the northern niche is richer than the other).

In the north wall of the chancel are two two-light windows equally spaced with a fifteenth-century vestry door between them, and in the south wall are two similar windows set close together at the east end of the wall with a small door farther to the west, and at the south-west a small square-headed low-side window, all of original date and all having moulded arches of the same section. A plain seat below the south-east window and a locker in the north wall are evidently original work. The jambs of the chancel arch have towards the nave clustered half-responds of the same build and detail as the nave arcades, but towards the chancel are rough blocks of masonry, perhaps the remains of the side walls of an older and narrower chancel against which the 14th-century work was built.

The upper stones of the outer order of the arch on the chancel side appear below the chancel ceiling which hides the rest of the order; they are worked with a deeply-cut thirteenth-century section.

The nave has fourteenth-century north and south doorways of moulded detail, the latter under the fifteenth-century porch, and in the tower is a third doorway in the west wall, of Decorated date; in fact, the stones may have been moved from their previous position under the wall of the nave.

The tower opens to the nave by a fine moulded arch of two orders of fifteenth-century date, and has a two-light west window. The staircase is at the south-west angle. The chancel roof is modern, but the tiles are old, probably early eighteenth century. The roofs of the nave and aisle are of the fifteenth century and have simple moulded timber with bosses at the intersection and wall posts.

At the west of the nave several rows of late Gothic benches, with buttressed ends with fronts and moulded rails, are still extant, but otherwise the woodwork of the church is modern, except for a seventeenth-century chest and a chair dated 1601.

In the north aisle is a flat arched recess, apparently early seventeenth-century date, which must have once held a monument. This now contains the war memorial tablet.

The whole of the church is to be repaired under the direction of Messrs. Richardson & Gill, of London, whose report is to be considered by the Society for the Protection of Ancient Buildings. Drawings of the tower are given this week.

THE ARCHITECTURE OF OXFORD.

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch), a lecture on "The Architecture of Oxford" was given recently, by Mr. W. S. Purchon, M.A., A.R.I.B.A., head of the department of architecture and civic design at the Technical College, Cardiff. Mr. J. E. Turner, J.P., was in the chair.

The lecturer explained that he selected Oxford for his subject partly because the forthcoming Conference of the R.I.B.A. was to be held in that city, but mainly because carved in its stones was a record of English architecture from its early beginnings to the present time. It was difficult, he said, to over-estimate the influence of that architecture on those who had studied at Oxford. Having expressed regret that modern developments in Oxford outside the Colleges were not more worthy of the noble traditions of the city, the lecturer proceeded to consider, in chronological order, some of its leading buildings.

He pointed out that it was often only lack of funds which saved fine Gothic work during the Renaissance, and that the architects of the Gothic revival often had as little respect for Renaissance work, but that the attempt made in 1910 to pull down Butterfield's Gothic Revival Chapel at Balliol was frustrated.

LEEDS & WEST YORKSHIRE ARCHITECTURAL SOCIETY.

In his Presidential Address to the Leeds and West Yorkshire Architectural Society, held on November 23, Mr. Eric Morley, F.R.I.B.A., F.S.I., said the last R.I.B.A. elections revealed an altogether new feeling amongst its voting members and marked still another step forward, and the number of provincial architects now serving on the Council was larger than ever before. It must be apparent to all that the provincial members of the R.I.B.A. would now be able to secure their demands at any future election, if only their full voting power were exerted to do so. Most important of all, and for the first time in history, they had elected a provincial architect to the chair of the Royal Institute. They would not then be unduly sanguine in fostering the hope that they were at last coming into their own. It only remained for each one of them to ensure his further advancement and to grasp the opportunities to his hand.

Nothing had affected so vitally the street architecture of this country as the crying demand for glazed acres of shop windows. It was the shopkeepers' one essential for successful trading, and even the most conservative of architects had been compelled to modernise his ideas and to modify the scale of his elevations to provide it. That had been achieved by the shopkeepers, but the shortage of office accommodation, calling equally for attention, was surely another example of the suddenly apparent and devastating troubles which appeared as a result of the war. The only possible solution was higher buildings. He was not advocating skyscrapers 600 ft. high, but buildings of from six to eight stories. A great deal had already been said on that subject, both for and against, but it appeared to them in Leeds and Bradford, at any rate, expansion in an upward direction was both desirable and inevitable. Any town with a limited central area, with a limited number of streets suitable for offices near the important centres of civic and industrial life, had its business locality finally restricted or confined so as to make lateral extension, except on the very smallest scale, almost impossible. The width of streets was, of course, a governing factor, but the recent case of Charles Semon & Co., Ltd., *v.* Bradford Corporation had established one fact for their guidance; that a building half as high again as the width of the street would still leave a sufficiency of light for the opposite owner.

There was little doubt that since the war the number of clients who inclined to the desire for higher buildings had increased, but there again a note of caution in dealing with them was essential. It was not usually feasible to erect such buildings on small sites, for the reason that the proportion of area required for lifts and staircases was often too great to ensure a sound financial undertaking. Sites must be sufficiently large to provide those necessities with economy, and the interests of a city were better served by one owner selling to, or sharing with his neighbour, than by either covering his own small site with a building not really suitable for the position it occupies.

Last year he visited the school of art whilst the preparation of designs for the front of a large post-office was in progress. He was amazed at the high standard of excellence in that room, and, though it occurred to him that the importance of scale and proportion as a preliminary essential for a façade of that description had possibly escaped one or two students at the outset, he felt really envious of the facilities the school provided. In spite of all that, he would say one or two words of counsel to the students. He would remind them that the nature of their earlier work would not, for the most part, include at all the planning of great monuments or the erection of buildings with imposing façades. It would rather consist of the alteration of houses, the building of garages and other very much smaller contracts. But should they feel disappointed or disheartened at the lack of public confidence that might seem to reflect, it would help them to remember that even garages were of two kinds—good and bad—and that it was just as essential to do their best with the smaller buildings as it was to achieve greatness with the larger. There was nothing so true in the architectural profession as that only the best was good enough, that success was only achieved by giving constant attention to the very smallest detail. If young architects gave this requisite attention they would have more work than they could do, and when that time arrived they would do well to have grasped early two other points of importance. First, they should cultivate strenuously the faculty of quick thinking, of coming quickly to a decision. Every architectural problem had a variety of solutions, and many of them must occur to every architect as he tried to evolve a design. Second, however sound and thorough their training, and however inviolable their position as architects, a good builder was their best friend. Remembering that the autocratic and dictatorial architect was not always the ideal, they should see that they worked actually with the builder and not exclusively apart from him. They should consult him whenever his experience would be of value. Fresh from the school, they will be gifted with a range of knowledge by the side of which that of the average builder appeared limited and unimportant.

The prizewinners in the Society's Competitions are as follows:—

SILVER MEDAL (for MEASURED DRAWINGS).—Mr. G. A. Burnett.

DESIGN.—(1) Mr. F. Chippendale; (2) Mr. George W. Alderson.

THE "HALDEN" PRIZE ESSAY.—Mr. F. Chippendale.

THE SOCIETY'S TRAVELLING STUDENTSHIP FOR 1923.—Mr. F. Chippendale.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

The following are notes from the Minutes of the meeting of the R.I.B.A. Council on November 19:—

TOWN PLANNING.—It was decided to circulate a memorandum on the subject of "Architects and Town Planning" to all Members and Licentiates and to the Allied Societies, with a request to the latter that they should use their influence to bring it to the notice of the Local Authorities in their districts.

HOUSING FEES.—A Committee was appointed to draft a new Scale of Charges applicable to Housing Work under the Housing (No. 2) Act, 1923.

THE R.I.B.A. LIBRARY.—A Committee was appointed to consider and report on the question of better and safer accommodation for the R.I.B.A. Library.

APPOINTMENT.—Mr. Digby L. Solomon was appointed to represent the R.I.B.A. on the Sectional Committee on Cement of the British Engineering Standards Association.

PROFESSIONAL CONDUCT.—A member was censured and suspended for six months for quoting fees lower than those prescribed by the R.I.B.A. scale when applying for appointment as architect to a public authority.

THE FRANCO-BRITISH UNION OF ARCHITECTS.—It was decided to make an annual grant of £20, to meet the expenses of the British Section of the Franco-British Union of Architects.

MEMBERSHIP.—The applications of four candidates for the Fellowship and two candidates for the Associateship were approved.

RESIGNATIONS.—The following resignations were accepted with regret:—J. Coulson Nicol, K. Gammell.

The Oldest Orphanage.

Sir James Carmichael, K.B.E., will preside at the 165th anniversary festival of the Alexandra Orphanage and Orphan Working School, to be held at Salters' Hall, E.C., on Tuesday, December 4.

READING SOCIETY OF ARCHITECTS.

"The Mediæval Point of View."

THE third of the course of four lectures on architecture, arranged by the Reading Society of Architects in conjunction with the Reading Branch of the Workers' Educational Association, was given at University College, Reading, on Wednesday last week. The chair was taken by Mr. W. Galt Millar. F.S.I., the Chairman of the Executive of the Reading Society of Architects.

The lecture, which was on "The Mediæval Point of View," was illustrated by lantern slides. The lecturer, Major H. C. Corlette, O.B.E., F.R.I.B.A., began his address by referring to the evidence of a continually developing tradition of building through all periods of history, which was, he said, to be seen in the relationship of Greek and Roman ideas of design to one another and of both to earlier Egyptian forms. He then showed that all mediæval building was related to Roman work either by direct influence or through the work of the Byzantine builders, but the mediæval point of view grew rapidly away from both these influences and moved on to the use of new methods unknown before. It was not apparently a conscious view but rather an attitude of mind, an instinct of freedom, that enabled them to make discoveries. They were practical hard-working men, not moved by weak emotions, but stirred by energy of mind and body to overcome new problems of structure by every and any scientific device they could use. But in this spirit of enterprise, of experiment, they attacked all questions, whether of government, of administration, or of building. By doing so they discovered the practical superiority of the pointed arch over other forms as a means by which to solve the special difficulties presented to them. In the result they produced all the wonderful varieties of Gothic architecture. But this Gothic work, which in itself was an expression of their sense of freedom, of liberty, was used under organised and approved restraints. In the northern parts of Europe they built as the climate required and the materials available allowed, and in the south they allowed the same considerations of sense to influence them in their work. Geography left its impression on their architecture. They never copied others who had built before them and they never initiated their own successes.

The influence of the mediæval point of view was not confined to a period from, say, the tenth to the fifteenth century; it extended, especially in England, till the end of the sixteenth century and later, and during the latter part of this period the Gothic mind was at work experimenting, with wonderful success, on the new and more modern problems of planning and design. Gothic architecture was not a thing of religious impulse or feudal demands, or a thing of traceries and cusps, or any other particular details. It was more an attitude of mind that attacked questions of building with sound sense, converting all difficulties of plan or construction into something usefully beautiful. Tradition among the craftsmen was its backbone, co-operation among them gave it power. The craft guilds were a school of workers. They were, in fact, a "workers' educational association," and they lived and learned not only by books and words but by the things they could touch and see, always searching for ideas of perfection by means of action and adventure, experiment and enterprise. The mediæval point of view produced achievements which have never been equalled in beauty nor surpassed in brilliance of intellectual power.

Exhibition of Decorators' Work.

An exhibition of decorators' work will be held at the School of Art, Mount-street, Liverpool, from December 5 to December 12, consisting of travelling exhibition works selected from those shown at the recent exhibition held in London by the Decorators' Federation, and much local work.

FORGERIES OF ANCIENT STAINED GLASS.

MR. J. A. KNOWLES lectured before the Royal Society of Arts on November 21 on this subject. The Earl of Crawford and Balcarres, K.T., P.C., F.S.A., presided.

The lecturer said there was no greater enemy of all true lovers of old work and old craftsmanship than the forger. Even those who felt nothing of the joy of possession, which was the essence of collecting, but who looked to make a living, and an honest one, by buying and selling, the forger did the greatest harm. They were very frequently his victims, and his productions turned up so frequently in auction rooms that both private individuals and dealers were very shy of bidding for something that might eventually prove to be worthless. Therefore, sometimes absolutely genuine specimens were passed over, or sold for a small figure. Unfortunately glass was a subject which was little understood, and while there might be scores of people who were capable of giving expert advice on an oil painting, and hundreds of others who had sufficient judgment to exercise a very sound judgment in such cases, those who were similarly equipped with a knowledge of glass painting were comparatively few.

Glass was a comparatively fragile material, and in support of this statement the lecturer said it had not been made without due thought or consideration. One could not but marvel, for example, that pieces of glass were frequently to be seen, such as those in St. Michael's, Spurriegate, York, of the most complicated shapes to cut and glaze, which had remained intact for hundreds of years without a break or crack in them. Other examples were the quarterings of the shields frequently seen in English and French modern glass, where the charges, three fleurs-de-lys, had been let into a piece of blue glass in which three lozenge-shaped holes had been drilled and cut to receive them, yet the glass had remained intact until this day.

Forgery, the lecturer said, was an iniquitous proceeding, inasmuch as it was an attempt to extort large sums of money under false pretences. Forgers frequently bought up panes of glass from old windows, and painted on them so that, though the glass was comparatively old, the painting was new. To determine whether or no a glass painting was a forgery, a thorough knowledge of the technical history of the art was very important, for it was in this, and not in dexterity of hand, that the forger most frequently gave himself away, through not knowing at what periods the various improvements in the material and methods of working were introduced. A glass painting that showed, for example, the use of yellow stain before the beginning of the fourteenth century was in the highest degree likely to be a forgery, for the earliest known example was dated about the year 1310—the Peter de Dene window in the nave of York Minster.

The Glass.

The painting of a forged panel might have been so skilfully executed as to deceive an expert. But unless the glass upon which it had been done exactly corresponded in every particular with glass of the corresponding period of that to which the forgery pretended to belong, it had to be rejected. The various characteristics which it might possess were many, and the difficulties of finding glass at the present day which would agree with all of them were great. The material on which the painting had been done must agree in (1) thickness, (2) texture, (3) waviness, (4) tint, (5) ability to stain without metalling.

The Enamel.

The next point, the lecturer said, was the question of the enamel with which the glass had been painted, and by enamel he did not mean coloured enamels, but merely the opaque brown, red or black pigment which was used for painting the outlines and giving the various tones and shades of the painting.

What glass-painters termed "foxiness" was a curious reddish cast communicated to the painting, to be seen when it was viewed from an angle instead of from a point directly in front. There were two forgeries of the sixteenth century which showed this. Generally speaking, modern enamel was greatly inferior in density to the old.

Coloured Enamels.

The lecturer then discussed the question of coloured transparent enamels—blue, red, purple, etc.—which were generally applied to the back of the glass. As a rule it might be generally laid down that, except in some few exceptional cases, the old enamels were never equal for brilliancy and transparency to those of the present day, and especially to those enamels of Continental origin. All this favoured the detection of fraud, for most of the forgeries of the present day were being made on the Continent, and the producers of them employed enamels of French or German make, which, no matter how superior they might be to the ancient ones, did not match them nearly as well as the English enamels did. Ancient enamels were very hard, but modern Continental enamels, on the other hand, were very soft. English enamels were much harder, and the colours were not so brilliant, but the forgers of glass were not generally aware of this fact.

Technique of the Painting.

The lecturer then dealt with the important question of the painting or "handling," as it was termed in oil painting. It was safe to say that a whole book might be written on the subject, and then all would not have been said. All he could do would be to lay down one or two main points of guidance. As regarded mediæval glass, the chief characteristic of the period was the tracing. Though much inferior work was produced, it would be a matter of the utmost difficulty to imitate the freedom and the endless variety of width in the traced lines in the best old work. There was one characteristic of technique which glass of all periods from the earliest to the latest must possess, and it was this: It must not have been passed through the kiln more than once. Although the lecturer said that it was always dangerous to dogmatise on these matters, and that he would not be at all surprised if some day an undoubtedly authentic specimen of ancient glass turned up which showed unmistakable evidence of having been fired more than once, and the painting carried further before the glass went into the kiln a second time, one could not be surprised at anything in stained glass. He had every reason to believe that the east window of St. Margaret's, Westminster, was a repainting by an eighteenth-century artist on the top of early sixteenth-century work.

Abrasion.

The lecturer then dealt with abrasion, and said that ruby glass had always been manufactured (and at the present day still was, except in one or two very exceptional cases) in a different way from the other coloured glasses. Instead of the sheet being coloured all through, the red laid in a thin film on the surface like the gelatine film on a photographic plate, the colourless glass beneath merely acted as a support. It was a great temptation to the forger to use acid, on account of the ease and speed with which it could be employed, but the edges of the film should be examined, and if they showed that acid had been employed the piece should be regarded with the gravest suspicion. Before the use of acid the red film had to be ground away with a grindstone or with either a copper wheel or an iron instrument and some abrading material such as sand or emery. It was obvious that by such a method it was impossible to leave a sharp, clean edge.

Corrosion.

Old glass was frequently corroded. Many people thought that a piece of glass could not be old if it were not corroded or pitted, but this had nothing to do with age. For example, they had two heads from the same subject, viz., the Coronation of the Blessed Virgin, in St. Helen's Church, York. The one was in a bad state of decay, the other not touched. They were both of the same age, and had both been subject to the same atmospheric conditions, yet the one was preserved, while the other was in an advanced state of decomposition on both sides. The causes of decay in glass were nowadays well understood, and the whole subject had been thoroughly treated in a paper by Mr. Noel Heaton (*Journal of the Society of Arts*, No. 2,834, March 15, 1907).

Swiss Glass.

Finally, the lecturer dealt with the subject of Swiss glass, and said that no glass was so much sought after as Swiss panes. Unfortunately there was not much of it to go round, and practically all the best pieces had long ago passed into public or private collections. This had led to a large number of forgeries of Continental origin appearing in antique dealers' shops and in auction rooms; the manufacture of them was almost a small industry. The skill, however misapplied, with which they were executed was amazing. Some specimens had even found their way into national collections, so that it was hopeless for the amateur to try to detect the good from the bad, as this would often tax the wits of the greatest experts. One of the most skilful of these forgeries was at Düsseldorf.

In conclusion, the lecturer said it was a great mistake to get into the habit of suspecting everything one saw, like a child who imagined there was a bear lurking in every dark corner on the way to bed. This was an attitude of mind to which experts were very prone; so that eventually they came to suspect their own shadows. Pieces which were offered at a reasonable figure were generally either perfectly genuine, or of the class of obvious shams which were turned out by hundreds.

Royal Sanitary Institute.

The next Congress of the Royal Sanitary Institute will be held at Liverpool from July 14th to 19th, 1924, by invitation of the Lord Mayor and City Council.

from an old Mural Tomb
Carisbrooke Church

LEGAL SECTION.

NOTES ON CURRENT CASES.

Lease Breaches of Covenant : Forfeiture.

We have lately noticed one or two decisions on forfeiture for breaches of covenants in leases, and the most recently reported case is Civil Service Co-operative Society, Ltd., *v.* Trustee of Sir J. R. D. McGrigor, Bart. (1923 2 Ch. 347). In that case the plaintiffs had demised certain premises to the defendant and another on a lease for 35 years at the yearly rent of £700 and a further sum as rent for hot water and heating the radiators. The lease contained covenants by the lessees to pay the rent and not to assign, underlet, demise or otherwise part with the premises or any part thereof, or any estate or interest therein without the consent in writing of the lessors, which consent should not unreasonably be withheld. The proviso for re-entry provided that if the lessees should be in arrears with the rent or any part thereof for 21 days after they had become due, or if the lessees should at any time fail to perform, or neglect to perform, any of the covenants or agreements of the lease to be performed by them, or if the lessees should at any time during the term become bankrupt or have a receiving order made against them, then it should be lawful for the lessors to re-enter. This lease was dated November 6, 1914, and on October 18, 1922, the lessees had presented their petition in bankruptcy and on the same day a receiving order in bankruptcy was made thereon, and on October 24, 1922, on the application of the official receiver with the consent of the debtors they had been adjudicated bankrupt, and subsequently the trustee in bankruptcy had entered into possession of the demised premises without opposition on the part of the bankrupts and without having to obtain any order requiring them to give up possession.

On November 13 the plaintiffs served a notice upon the defendants and upon their trustee in bankruptcy setting out the terms of the lease and giving notice that upon the expiration of 14 days from the date of the notice they intended to enforce the right of re-entry or forfeiture.

On November 28, 1922, the writ in the present action was issued claiming a declaration that the plaintiffs were entitled to recover possession of the premises as on a forfeiture of the lease, possession and mesne profits, on the grounds of (1) breach of covenant against assigning or parting with the premises and (2) bankruptcy. It may here be mentioned that on December 28, 1922, the defendants received from the plaintiffs a written demand for £203 15s. addressed to the liquidators, made up as follows : Rent to December 25, 1922, £175 ; rent of radiators, &c., £9 3s. 9d. ; water rate, £19 11s. 3d. and a cheque for the amount signed by the trustee in bankruptcy and a member of the Committee of inspection had been sent to the plaintiffs on the same day and accepted and cashed by them.

The defendant who was the trustee in bankruptcy raised various defences. First it was said there was no breach of covenant. This question as to whether the defendant by consenting to be adjudicated bankrupt had caused a breach of the covenant not to assign seems not to have been carried further, since under the lease bankruptcy itself was made a ground for forfeiture. The two main defences were that under the Conveyancing Acts for the space of one year the plaintiffs were deprived of the right to re-enter, and the question whether the receipt of rent created a waiver of the right to forfeiture.

The point under the Conveyancing Acts is complicated. Under section 14, subsection (1) of the Act of 1881 a right of re-entry or forfeiture under any proviso or stipulation in a lease for a breach of covenant or condition in the lease shall not be enforceable by action or otherwise until the lessor serves on the lessee a notice specifying the breach complained of and if the breach is capable of remedy requiring the lessee to remedy the breach, and in any case requiring the lessee to make compensation in money for the breach and by subsection (2) the lessee may apply to the Court for relief where an action is being brought by the lessor. Subsection (6) provides that this section does not extend to a covenant against the assigning, underletting or parting with possession of the premises, nor to the right to possession in the case of bankruptcy, but the Conveyancing Act, 1892, in section 2 subsection (2), as the Judge put it, introduces a complication for it enacts : "Subsection (6) of section 14 of the Conveyancing Act, 1881, is to apply to a condition for forfeiture on bankruptcy of the lessee or on taking execution of the lessee's interest only after the expiration of one year from the date of the bankruptcy or taking in execution, and provided the lessee's interest be not sold within such one year, but in case the lessee's interest be sold within such one year subsection (6) shall cease to apply thereto."

It was contended for the defendants that the effect of this subsection was to deprive the landlord of his right to forfeiture for the space of one year from the date of the bankruptcy, but the Court held that the effect of the legislation was as follows : "The right of entry or forfeiture or on taking in execution the lessee's interest, is fettered." That is, is made subject to the provisions contained in section 14 of the Act of 1881. "If the lessee's interest be not sold within the one year the fetter is removed at the end of the year"—that is, it can be exercised without observing the conditions in subsection (1) and (2) of the Act of 1881. "If the lessee's interest be sold within the one year the fetter is not removed but continues." In the case under consideration the lessee's interest had not been sold, and therefore the Court held that the landlord would be entitled to enforce the right of forfeiture on bankruptcy if the provision of subsection (1) and (2) of the Act had been complied with.

This finding made it necessary for the Court to consider whether those provisions had been complied with, and on behalf of the defendants it was contended that they had not, firstly, because the notice of November 13 named an unreasonably short time, 14 days, and secondly, because the notice did not require the lessee to make compensation for the breach. As regards the first point the Court held that no special circumstances had been shown in this case for an extended period, and as the notice is only intended to give the person whose interest it is intended to forfeit time to consider his position and of acting before the action is brought, the fourteen days was sufficient time. As regards the second point the Court said the point raised a curious question, as it was difficult to see what compensation for the breach could be asked in a case of bankruptcy for the breach was irremediable, yet the words of the section "in any case," seemed to imply a notice must be given whether or not the breach was capable of remedy, but the Court of Appeal in Lock *v.* Pearce (1893 2 Ch. 271) had held in general terms that the absence of a requirement for compensation does not invalidate a notice if the lessor does not require compensation, and following that decision the notice in this case would be a good one.

The only remaining point raised by the defence was whether the receipt of rent constituted a waiver of the forfeiture. The demand for rent was made with knowledge of the bankruptcy, for rent partly accrued due before the bankruptcy and in part due subsequently to it, and it had been followed by payment and acceptance. The Court held that the issue of a writ and service of a writ in an ejectment action is such a final election by the landlord to determine the tenancy that a subsequent receipt of rent is no waiver of the forfeiture. The Court relied upon the following cases :—Jones *v.* Carter, 15 M. and W. 718 ; Grimwood *v.* Moss, L.R. 7 C.P. 360 ; and Evens *v.* Enever (1920 2 K.B. 315, *The Builder*, April 30, 1920); and especially adopted the words of Lord Coleridge in this latter case : "There is a series of cases which establish that if an action is brought for recovery of possession for breaches of covenants in the lease that it is an irrevocable election to determine the lease and that no subsequent acts of the plaintiff can be relied upon as qualifying that position."

We have recently dealt with this question of waiver in connection with two other cases ; thus in Elliot *v.* Boynton (1923 1 Ch. 422, *The Builder*, July 27, 1923), the Court pointed out that the receipt of rent after the landlord had unequivocally shown his intention to put an end to the lease would not operate as a waiver, and in the case Fullers' Theatre and Vaudeville Co., Ltd., *v.* Rofe (1923 A.C. 435, *The Builder*, August 31, 1923), the Privy Council approved the decision in Mathews *v.* Smallwood (1910 1 Ch. 777) that "Waiver of a right of re-entry can only occur where the lessor with knowledge of the facts upon which his right to re-enter arises does some unequivocal act recognising the continued existence of the lease," and in our note to that case in the Privy Council we pointed out that the complement to this proposition would be that the receipt of rent after the landlord had unequivocally shown his determination to determine the lease would not operate as a waiver of the right to determine the lease.

We have endeavoured to state the facts and effect of this decision as briefly as possible, but it illustrates the extreme complexity of the law relating to what would appear everyday incidents in connection with the relationship of landlord and tenant.

Ancient Lights : Site Value.

In our Legal Section, March 30 last, we referred to a case Wills *v.* May, which at that date was very shortly reported, and we said it would be necessary to refer to it again. It is now fully reported, 1923 1 Ch. 317, and the case is one of importance to those possessing building sites. The plaintiff owned two houses numbered 117 and 119, adjoining each other, which had been purchased at public auction in February, 1921, and in the particulars it had been pointed out that although the properties were old the site would be valuable for a factory or other commercial premises. The character of the neighbourhood was in process of changing from a residential to a commercial district.

It is unnecessary to go into detail into the nature of the obstruction which was the subject of the action, as it is sufficient to say that the two houses were adjoining and it was found that the ancient lights in No. 117, the northernmost of the two houses, had been obstructed by the defendant's operation in developing for commercial purposes his site No. 115, so that the landing, the staircase, and the larder had been rendered sensibly less fit for their purpose than they were before, but that the Court, after considering all the circumstances, had considered that this was not a case for a mandatory injunction, as by structural alterations the premises could be rendered as convenient as they were before and the cost of these alterations was assessed at £50. But this did not dispose of the claim, for it was alleged that the obstruction to the light to No. 117 would damage the site, treating the sites of the two houses as one if developed for commercial purposes, and the Court held that it had been proved that the plots had been rendered less valuable for the erection of buildings of a commercial character owing to the obstruction of light.

It has been held in the case Griffith *v.* Richard Clay & Sons (1912 1 Ch. 291) that damages can be given for an obstruction which diminishes the site value, but there are some distinguishing features between that case and the one we are considering. In that case the plaintiff owned two houses, but the ancient lights of *both* houses had been obstructed. There was a piece of land in the rear of both houses and it was held that the damages recoverable were not confined to the depreciation of the two houses alone, but extended to the whole of the plaintiff's premises considered as one building site.

There was a further distinction between that case and the present, as there the houses were old and dilapidated, and would soon have had to be demolished, whilst here No. 117 was still in good condition, and likely to last several years longer, and No. 119 was let on a lease with about 14 years to run, and therefore development of the site must be delayed for that period unless a surrender of the lease could be arranged.

Following the decision in Clay's case the Court awarded damages of £150 in all—that is, the £50 mentioned above for the structural alterations to No. 117 rendered necessary by the obstruction of the light to that house as a house, and £100 in addition for the damage to the combined sites. But, having regard to the point we have mentioned above that in this case only the light to one of the existing houses was obstructed, and the possibility that in the event of an appeal the Court of Appeal might hold that the damages must be limited to the site of No. 117 alone, to avoid the necessity of a new trial the Court also assessed the damages on that basis to that site alone at £50. Thus, if the judgment remained undisturbed the damages both to the house and the site of both houses was £150, but if on appeal it was found the damage to the second site could not be taken into consideration, then the damages would be reduced to £100.

Trade Union Law: Inspection of Books.

The case, Dodd *v.* Amalgamated Marine Workers' Union, which we noted in our issue of November 2, as to the right of members of a trade union to have expert assistance in proper cases where they desire to inspect the books of the union, was the subject of appeal on the same day that our notice of the case appeared, and it is unnecessary to restate the facts as they will be still within the recollection of our readers. The Court of Appeal affirmed the decision given in the Court below, and it is unnecessary to supplement our former note except to point out that the Court of Appeal, in considering this case, indicated that although the point arose in connection with a trade union under the Trade Union Acts, it was not limited to such matters but was of application where such persons as members of companies, partners, and others claimed a right to inspect books.

Norrey *v.* Keep (1909 1 Ch. 561), which we referred to in our former note, applying the law to trade unions, was really founded upon Bevan *v.* Webb (1901 2 Ch. 68), a case which turned on the Partnership Act, 1890, which contains provisions practically to the same effect as the Trade Union Acts as to inspection of books. The Court of Appeal referred to this case, Bevan *v.* Webb, which also was decided by the Court of Appeal, and said it made the law perfectly clear that where a right to inspect books is given the intention is that that inspection shall be made effective, and thus where a person is under a disability not only physical, such as blindness, but a disability from lack of skill or experience, he is entitled to the assistance of an expert agent.

Thus, as we pointed out in our former note, the applicant for inspection must make out a *prima facie* case for professional assistance, but the onus then of proving that the application should not be granted on any grounds is laid upon the persons resisting the application.

Rent Restriction: High Court Proceedings.

The recent decision of the Court of Appeal in Hill *v.* Luck (*Weekly Notes*, November 3) should be noted, as it deals with a point of importance to litigants. The plaintiff was claiming possession of a house which was let to the defendant on a monthly tenancy at a rent of £3 10s. a month, the tenancy being terminable by a month's notice on either side. The tenant had fallen into arrear with the rent, and on June 1 the plaintiff had given him due notice to quit. The defendant not having given up possession, the plaintiff on July 23 commenced proceedings in the High Court claming possession, a month's rent, and mesne profits. On the writ in this action the plaintiff, acting under the kind of summary jurisdiction conferred by Order XIV of the Rules of the Supreme Court, applied for leave to sign judgment, and this order was made by a Master and afterwards affirmed by a judge.

The defendant appealed from this order, and on the appeal two points were raised:—(1) Whether the High Court in proceedings arising out of the Rent Acts had jurisdiction, and (2) whether if it had jurisdiction the procedure provided by Order XIV was available.

As regards the first point the Court of Appeal held it was clear from section 17 sub-section (2) of the Rent Act, 1920, that exclusive jurisdiction was not conferred upon the County Court, and that an action could be brought in the High Court, but that in that action the plaintiff could recover no costs. The words of the sub-section are: "A County Court shall have jurisdiction to deal with any claim or other proceedings arising out of this Act or any of the provisions thereof notwithstanding that by reason of the amount of claim or otherwise the case would not, but for this provision, be within the jurisdiction of a County Court, and if a person takes proceedings under this Act in the High Court he shall not be entitled to recover costs." It will be observed that this subsection is more positive than some Acts relating to cases brought in superior courts which could have been brought in inferior courts for the deprivation of costs is absolute, and this makes it very important for practitioners before taking proceedings in the High Court to consider whether "the proceedings arise out of the Act or any of the provisions thereof." This point was illustrated in the case of Wolff *v.* Smith (see *The Builder*, July 20, 1923), which was a case of trespass brought in the High Court, but the plaintiff was a "statutory tenant" under the Rent Acts, and in that case it was held that as a statutory tenant could only prove his right or title under the Rent Acts the proceedings arose "out of" the Act, and no costs could be recovered. In the present case it was held that the proceedings clearly arose out of the Act, because they could only be enforced if the conditions prescribed in the Act in section 5 were fulfilled, and the Court thought it reasonable an order should be made under that section.

On the second point, as to proceeding under Order XIV, the Court of Appeal held that certainly in this case that procedure was not applicable, for no evidence had been tendered relating to those conditions, and in any case, having regard to those conditions and the provision requiring the Court to be satisfied that it was reasonable to make the order, it was very doubtful whether Order XIV could ever have application to cases under the Act.

We may notice a point mentioned by Lord Justice Bankes in his judgment. Questions of law are not argued under Order XIV, and he pointed out that a serious question of law arises in connection with the words "any rent lawfully due," in section 5 subsection (1) (*a*), as to whether they refer to rent due when the proceedings are commenced or due when the order is made. If the latter were the true construction of the words no order could be made if rent due at the date of the writ had been tendered before the order was made. In this case two months' rent had been tendered about a week after the issue of the writ. In the result, as no costs could be recovered by the plaintiff and the rent had been paid and possession had been given up, the appeal was by consent dismissed without costs.

Property Tax: Landlord and Tenant.

We may notice an interesting decision given in the House of Lords in the case Drughorn *v.* Moore (*Weekly Notes*, November 17). The respondents on this appeal were the lessors of certain premises in London and the appellant was the lessee. In 1918 negotiations had taken place between the parties for the leasing of certain stables to the appellant, and it had been proposed that the respondents should put the premises into repair and that the rent should be £85 per annum, but ultimately the appellant, the tenant, agreed to do what was required in the way of repair in consideration that no rent should be payable for the first year of the term. The premises were accordingly leased to the appellant for a term of fourteen years at a peppercorn rent for the first year, from Christmas, 1918, and thereafter at a rent of £85 per annum. Thus the first payment of rent in money would be due on Lady Day, 1920. The income tax payable under Schedule A of the Income Tax Act for the financial year ending April 5, 1920, was £23 5s., payable in two equal instalments. The appellant paid the first instalment and deducted the amount from the first quarter's rent, but the respondents returned the cheque. The appellant paid the second instalment and claimed also to deduct that from the rent, but apparently the respondents refused to accept that cheque also, for they brought this action in November, 1920, claiming three quarters' rent, but admitted that the appellant was entitled to credit in the action for the tax paid in respect of the period December 25, 1919, to April 5, 1920, that is, that portion of the period when rent in money was actually due. The contention of the appellant was that under the Income Tax Act he was entitled to deduct the tax from the rent, and the Court below had held that, as the money expended by the appellant on repairs by agreement took the place of rent, the deduction could be made; but the Court of Appeal had reversed that judgment (see *The Builder*, August 4, 1922). Rule 1 of Schedule A, No. VIII, to the Income Tax Act, 1918, provides, "A tenant occupier of any lands, tenements, hereditaments or heritages who pays the tax shall be entitled to deduct and retain in respect of the rent payable to the landlord for the time being an amount representing the rate or rates of tax in force during the period through which the said rent was accruing due for every twenty shillings thereof, the said deduction to be made out of the first payment thereafter made on account of rent."

The House of Lords held that the amount expended on repairs could not be treated as rent; the agreement between the parties was not that the tenant should pay rent in the form of repairs, but that he should do the repairs and pay no rent. It was also held that the instalments could not be treated as money paid for, and on behalf of, the respondents, and at their request, because the tenant and not the landlord was primarily liable for the payment of the tax. We may remind our readers that in the case Rossdale *v.* Fryer (1922, 2 K.B. 303, *The Builder*, November 24, 1922), where the original lessor of a house assessed for income tax at £450 net had sublet the premises at a higher rent than he himself was paying, it was held by the Court of Appeal that the sub-tenant could not deduct income tax on the rent paid by him, but only on the amount as based on the assessment. In that case it will be remembered that the subtenant had again underlet the premises and his under-tenants had deducted income tax from him based on the net assessment, and it was held that under Schedule A, VIII, r. 4, the sum paid by the under-tenants was equivalent to sums "actually paid" by the immediate landlord, and must be considered in the deduction he claimed to make as against his landlord.

Associateship of the R.I.B.A.

The Board of Architectural Education desire to draw attention to the following decision of H.M. Board of Education with reference to Technical Teachers' Qualifications:—Architecture.—H.M. Board of Education recognise the Associateship of the R.I.B.A. (if awarded after passing the Examinations of the Institute) as the equivalent to degrees of Universities in Great Britain and Ireland.

THE BUILDING TRADE.

YORKSHIRE EDUCATIONAL ASSOCIATION FOR THE BUILDING INDUSTRY.

AT a well-attended inaugural meeting of this Association, held in the Technical College, Bradford, on Saturday, November 17, Councillor Reeves Charlesworth, F.I.O.B., Sheffield, President of the Yorkshire Federation of Building Trades' Employers, was unanimously elected President of the Yorkshire Educational Association for the Building Industry.

In the course of his presidential address, Mr. Charlesworth said that they had met for the first time in history as a complete organisation for the purpose of encouraging and furthering building trade education—a body of building trade enthusiasts and experts, comprising technical professors, instructors, employers, employees and educational representatives. By their presence there he took it that they were all keenly desirous that the youths who wished to enter the building trade in the future should have the best instruction, on the best and most profitable lines that it was humanly possible to give them. Being elected to become the first President of such an important body, which had for its objects the better training and education of the building trade craftsmen and the closer relationship of the professors and tutors occupied in that direction, was no small honour. It had been publicly stated that to become a craftsman in the building trade only required a short training. It had been tried. Such a position of things was ridiculous and proved an utter failure. To be a craftsman of any note in the building trade involved hard work, both in study and practise. It required the guidance of eminently trained and capable tutors. It was not within his knowledge to say how many students they ought to expect in the various districts. Such knowledge was within the reach of every local authority who applied to the Secretary of their district, because their agreed rules laid it down that every firm might take on one apprentice and one to every four craftsmen in every skilled branch of the trade. The object of education in the building industry was to improve the knowledge of employers and operatives and all connected with the industry.

Mr. J. L. Manson, H.M.I., said he had been asked to sketch out, so far as it was possible for him to do so, some of the problems which the Association was likely to find. He would like to deal with the matter under the following heads:—

(1) The problem of apprenticeship in modern times was quite different from the problem of apprenticeship in days gone by. (2) Considerable changes had been taking place in the building industry, and they now needed a much more scientific treatment of their problems. (3) Improvement in the instruction given in technical schools. (4) Possibility of further co-operation of the industry.

He thought it was a fact they would all accept that there had been a very serious and marked decline in what they might call the historical or normal type of apprenticeship. It was unlikely that they would be able to return to the exact kind of apprenticeship that they used to have. Modern conditions were so different that the solution used in olden days would probably not be satisfactory now. Any solution that was satiafactory at the present time would have to be in relation to the developments that had been made in the past, and in so far as practical experience had shown them how to develop their knowledge this practical experience should be incorporated. They should realise that, apart from family and social relations, the relation between the master and the apprentice was one of the oldest personal relationships of which they knew. The main idea of technical education was the transmission of executive skill. In olden times the difficulties in transmitting that knowledge would arise, because it would not be merely mechanical skill but the accumulation of knowledge which would have to be transmitted, so that their work to-day bore a distinct relation to that work. Coming down through the ages, they could think of the period when ability to draw enabled men to transmit their ideas more readily. When printing was invented they could see the immense changes which had taken place. They could see the way in which the personal element had been lessened as soon as books were introduced, and one of the difficulties they had to face to-day was the diminution of personal contact. Coming down to manual work and the amazing specialisation which had taken place in modern industry, they saw difficulties introduced into the handling of this particular problem of the transmission of skill and knowledge in particular trades. They heard considerable talk of the evils that had arisen from the industrial organisations. He sometimes felt that they did not realise the amazing and wonderful development those organisations had given rise to. In the case of the building industry they had some peculiar conditions. The building industry had not, as yet, been greatly affected by the factory system. The builder could not produce his construction in a factory or workshop. He had to produce his construction on the site of the building. There could be no question, however, that wherever it could be done they were seeing the introduction of mass production and the increasing use of machines and large scale production. It was important from the industry's point of view that foresight should be exercised. Throughout the industry there should be that fore-knowledge and additional knowledge which was the only way in which they could be assured that there was a certain amount of elasticity in the way in which they met new situations. It was very important that they should have in view the whole range of those problems, past, present and future. In the immediate past they had to deplore that in many cases they had found the employers looked upon the question of apprentices from a business point of view. Masters had risen from the ranks and had generally themselves to thank for their success. Therefore, they looked upon the problems of the industry from the purely personal point of view, missing the fact that the industry might have problems which the individual must meet and help to solve. From the point of view of the employer, apprenticeship might not pay. There had been a certain difficulty with regard to the supply of skilled labour. The conditions and the enormous effect of the war on the building industry had undoubtedly brought them face to face with the shortage of skilled labour in a very acute form. The employees had had to form organisations for defence more than for anything else, so that these organisations dealt with wages and conditions, and not to any extent with the actual formation of skill in that particular craft.

Some of the changes wrought by the present civilisation were:—

(1) It had reduced the range of the activities of the individual worker; (2) It had reduced the apparent need for knowledge on the part of the worker. It had also enormously increased the requirements in the matter of knowledge on the part of the employer and the technical expert. The designer and manager were not taking an actual part in the construction. The non-manual designer tended to override the practical worker. The designer and manager were in one compartment and the practical worker in another. In some of the other industries they had seen the enormous development in the use of machinery. That had tended to cover up the fact that there had been a reduction in the actual skill of the worker. In the building industry they saw the results of lessened skill and craftsmanship, and they bemoaned the fact that it was so. One of the difficulties they had to face was that, on the industrial side, when a trade organisation interested itself in trade instruction, there was a strong tendency to limit that instruction to purely trade things. He thought they would all agree that the person who was useful in life was the person who really knew a little more than was actually necessary for his job. Even in the transmission of manual skill there was an accompanying knowledge which should go with the training and mere manual skill. This margin of knowledge was extremely important in modern development. In the case of the plumber they had seen the introduction of a number of new methods and materials, and instead of those new materials and methods continuing under the direction of the persons originally responsible for them they had seen the developments of new trades—the hot-water engineer, &c. With the introduction of modern materials, it was important that even if the worker did not enter into the design of the buildinghe should have some knowledge of the various conditions to be watched during the erection. Concrete buildings had sometimes failed because of a lack of elementary knowledge on the part of the worker. In other industries where research had been carried on, one of the problems which had arisen was the enormous difficulty of applying that knowledge because the workers objected and had not that margin of knowledge which would enable them to adapt themselves to new conditions. Trade unions were anxious to restrict the numbers of workers in each branch of a trade. They had the conception that one could, by limiting labour to a definite figure, exactly supply the demands of the industry. But the building industry was so fluctuating that it was almost impossible, and there really must be a margin of skilled workers. Then there was the problem of vocational selection. They could not always decide in the early stages what the boy was fitted for. Their teaching, therefore, must not be too narrow. They must realise, particularly in the early stages, that a boy might not have made up his mind at 16 exactly what he was going to be, and in the future he might be something vastly different from what he was aiming at at this particular stage. In the past the development of the industry had not been on scientific lines. Many of the operations were more or less unchanged. The time had now come when the building industry must be put on more scientific lines. The introduction of the specialist firm introduced a danger in the building industry which he thought it was important that the industry should foresee. In the erection of a new building in the past the architect had selected a main contractor to undertake the main responsibility for the erection. In recent times there were so many sub-contractors that the main contractor was scarcely more responsible for the work than any of the sub-contractors. This was a situation which the builders ought not to accept without some attempt to improve it. The line that he thought was sound was as follows: In all those special methods of construction they found that the architect was quite ready to consult the specialist firms and might even invite them to design that section of the building with which they were concerned. Every architect considered himself quite capable of designing the work that the builder did. This could not go on, because the point came up that modern industrial conditions had produced the expert who was not in actual contact with the construction.

The last point was that in the future they should come into closer contact with the indus-

try. They had in the building industry an extremely interesting industry, because of its age and because of the work that it undertook. It touched humanity very closely. Modern civilisation would be quite impossible without the home and the home quite impossible without the house, and we had in that sense elements of educational value which were found in such a concentrated form nowhere else, and on the side of technical education we were coming to realise that it was not merely instruction to help people to earn their daily bread, but instruction which had in it the essence of real education.

The meeting then appointed the various officers and council of the Association. The council consisted of representatives of (*a*) building employers, (*b*) building operatives, (*c*) local authorities, (*d*) heads of technical institutions, and (*e*) building teachers.

THE SURVEYORS' INSTITUTION.

Mr. Alexander Goddard, Secretary of the Surveyors' Institution, writes as follows:—

"The Surveyors' Institution, as you are aware, is one of the professional societies whose views on the provisions of the draft Rating and Valuation Bill were invited by the Minister of Health. The Council referred the measure to a strong Special Committee, representative not only of surveyors engaged mainly in rating work, but also of those who have to deal with questions of local and imperial taxation in connection with the management of urban and rural estates. This Committee, having taken advantage of the Institution County Branch organisation in order to ascertain the views of members in all parts of England and Wales is now engaged in considering the Bill in detail. In view of the fact that a certain amount of opposition to the Bill *in toto* appears to be developing, this Committee thought it desirable to issue to the Council an Interim Report, indicating that in their opinion the Bill embodied certain general principles which were worthy of support by the Institution. This Report, a copy of which I enclose, has been approved and adopted by the Council."

Interim Report of the Special (Valuation and Rating Bill) Committee.

Your Special Committee appointed to consider and report to the Council upon the provisions of the Draft Rating and Valuation Bill have not yet concluded their detailed investigation into and recommendations upon this measure, but they consider it desirable to make an interim report in order that the Council may be informed as to the general conclusions already arrived at. The Bill provides for such long-needed reforms as:

(*a*) Periodic revision of values throughout the country; and

(*b*) All rates and taxes being charged on values appearing in one and the same valuation list.

In the opinion of your Committee these general principles should receive the support of the Institution.

The Committee's detailed recommendations as to amendments will be directed particularly to maintaining local valuation by local authorities and, while recognising that the use of the values for taxation purposes of necessity involves some initiative work and control by revenue officers, that such work and control should be kept within due limits such as now obtain in London under the Valuation of the Metropolis Act, 1869. The proposals contained in the Bill for the establishment of a Central Valuation Authority for dealing with special properties will receive careful consideration by the Committee and specific recommendations in connection therewith will be embodied in the Final Report.

British Empire Exhibition.

We understand that the Town-Planning Institute will hold a conference at Wembley from May 5 to May 10, 1924.

BUILDERS' BENEVOLENT INSTITUTION.

ANNUAL DINNER.

The seventy-first annual dinner of the Builders' Benevolent Institution was held on November 22, at the Hotel Victoria, the President, Mr. George M. Burt, F.I.O.B., presiding over a gathering of about 300, amongst whom were Major R. J. Holliday, M.C., F.I.O.B., Past-President B.B.I.; Mr. A. B. Falkner, F.I.O.B.; Capt. G. J. Aldous, M.C., F.I.O.B.; Mr. A. H. Adamson, F.I.O.B.; Mr. A. B. H. Colls, F.I.O.B.; Mr. F. Higgs, F.I.O.B.; Mr. Walter Lawrence, F.I.O.B.; Mr. Roland B. Chessum, F.I.O.B.; Mr. John T. Bolding, Mr. H. Le Marchant, Mr. F. Coleman, and Mr. J. M. Theobald, F.S.I.

MR. A. H. ADAMSON, F.I.O.B., in proposing "The Builders' Benevolent Institution and its President," explained that the Institution was founded seventy-five years ago for the purpose of granting relief to necessitous builders over fifty-five years of age who had carried on business for ten consecutive years within a twelve-mile radius of Charing Cross. At the present moment there were fifty men and women pensioners. For the past three years the Committee had been able to supplement the pensions by a gift at Christmas of £5, and for the last year they had been able to make a similar gift at midsummer as a contribution towards the increased cost of living. He thought they would agree with him that the Institution deserved all the support that could be given to it. The Institution received support from all interested in the building industry, but sometimes wondered whether employers could not do something more in supporting the Institution, not so much in a direct way but indirectly. By that he meant they might all do what they could to prevent so many employers falling by the way. He thought the Institute of Builders had made a move in the right direction, because in their syllabus of the examinations which would in future be held for Licentiate and Associate members of the Institute they had made accountancy and costing one of the compulsory subjects, and if employers generally took more notice of accountancy and costing there would not be so many failures in the industry. He thought the members might help their fellow builders in trying to see if there was not some means by which the vast amount of labour which was thrown away in tendering could not be improved upon. The conditions in the industry at the moment were disquieting, much more so than before the war. The spectacle of a number of firms tendering for a job was wrong altogether. He had been going through his own tender book and had noticed one or two glaring instances of what he called absolute waste of labour. In one job to the value of £5,000 there were twenty builders invited to tender, and in another of £2,500 eighteen were invited to do so. That meant that a great deal of money was wasted by employers in tendering for jobs which there was no possibility of ever getting. If builders were asked to supply information as to the number of jobs they had tendered for and the number they got the probability would be that they would find they only got one job out of twenty. This was the result of fierce competition, and he hoped that one of these days the builders in conjunction with the architects and surveyors would find a more reasonable way of getting tenders for jobs than that which existed at the present time. As long as those conditions prevailed, it was up to everyone to do what they could to help their brother builders who met misfortune. He could not imagine some of the other industries in the country working on such a narrow margin of profit as the builders.

THE PRESIDENT, in reply, said he desired to thank everyone present and all the subscribers for the help that they had given. He had hoped that they might have been able to collect as much as had been done in previous years, but unfortunately times were bad; he was roughly about £300 short of what the total was last year.

MR. A. H. B. COLLS, in proposing "The Allied Trades," said the prosperity of the allied trades depended upon the prosperity of the building trade. He felt sure he was voicing the feelings of his fellow builders that the success of a large job depended very considerably on the co-operation and goodwill of the sub-contractor to the builder.

MR. H. LE MARCHANT responded.

MR. A. B. FALKNER, in proposing the toast of "The Vice-Presidents, Trustees, Committee and Stewards," said he was sure that the Committee had derived a great deal of satisfaction and pleasure from the realisation that they have brought a certain amount of brightness into the sad lives of their less fortunate brothers in relieving their necessities and endeavouring to smooth out their battles during their declining years. He coupled the toast with the name of a veteran, Mr. John T. Bolding, than whom he could safely say no one had longer or better served the Institution: he had been engaged in this work for 53 years.

MR. JOHN T. BOLDING, in responding, said the large sum that had been collected during the last three or four years had been collected through the energy of the Presidents, and if the President instead of going back four years had gone back fourteen he would have had a large amount beyond the average.

CAPT. G. J. ALDOUS proposed the toast of "Our Visitors." He said to the architects he would offer a special welcome, for it was always a pleasure to meet them at these functions and to get to know them in a more personal manner than it was possible in the average business acquaintance. It was by the closest possible co-operation between architects and builders that the best results were achieved in connection with any building contract. The quantity surveyors were with us to-night, in his opinion, the builders' best friends. By the excellence of their quantities, the clearness of their descriptions, they had saved many hours of labour in the preparation of estimates.

MR. F. COLEMAN, in responding, said he was pleased to notice that the building trade kept a stiff upper lip during times of stress. He admired that spirit very much, and he thought that everyone who fought through periods of depression the same as the building trade did would get their reward.

At the close of the proceedings the President stated that after the collection during the evening he was still short of £73 15s. He would have liked to have got the extra money, but he must admit they had all been very good to him. The total amount which had been collected was £1,898 15s. 6d., about £102 less than was collected last year.

British Museum Lectures.

These lectures continue to open out interesting points in regard to ancient civilisations, both as regards methods of building and customs of the people. The Egyptians had a regard for planting trees, though lacking the advantage of any soil in which to plant them. At the Senusert Pyramid pits were found outside the walls. These curious round pits, coming at regular intervals, could not be explained, but it is now supposed they were filled with soil and that trees were planted in them. The rock tombs of Egypt are a remarkable example of the traditions of building being continued though the conditions required no such structural forms. They cut rafters on the face of the roof out of the solid rock, and columns were hewn out of the solid mass of the rock they were excavating in the same manner as if they were building. The temple of the Sphinx had wells inside it, in which were found statues in Dianté and green basalt; this Sphinx dating probably from during, or after, the fourth dynasty. In the back of the Sphinx itself is a grave, and as no burials took place in that region after the period of the great Pyramid of Khufu, the Sphinx must date from after that time. It is cut out from the solid rock, its natural form having probably first suggested the form of a Sphinx, and so they carved it into one. Its face is believed to have been originally painted red.

PUBLIC WORKS CONGRESS.

As in previous years, a Congress was held this week in connection with the Public Works, Roads, and Transport Exhibition at the Royal Agricultural Hall, London (a review of the Exhibition is given on p. 858), and a large number of papers were read dealing with subjects of interest to local authorities.

The Road Beautiful.

In the course of an address entitled "The Road Beautiful," MR. J. L. REDFERN, A.R.I.B.A., Borough Engineer and Surveyor of Gillingham, said proper regard for proportion, a careful selection of materials, and attention to details, whether in the design of a bridge, a building, or a road, would produce a result that would merit the appreciation of those who had to use them, and redound to the credit of the designer. Good environment played an important part in the formation of good character. The house and its neighbourhood which possessed any elements of beauty helped in that way, and now that folk in their leisure had betaken to the highways, roads also should contribute to that desirable end.

It could not be gainsaid that the roads of this country were being adapted to meet their main purpose, and the development of road-making during the past dozen years had proved that British engineers were second to none in their ability to devise roads strong enough to bear any accession of traffic, and spacious enough to satisfy the most progressive; yet one sometimes saw roads strong enough to carry their burden but with some fault, it might be of design, setting out, or finish, which displeased the eye.

If a road were intended to be straight, the kerb should be laid straight in fact. Whatever pleasure a kinked or wobbled kerb gave to him who made it so, it gave none to the beholder. Where the road wound they should find curves set out with the utmost care, so that the eye swept them without offence. A carriageway which changed its width seldom looked so well as one in which the kerbs ran parallel. If there must be irregularity in road boundaries, the variations might with advantage be thrown into the footpaths. The cross-fall in a footpath, and the contour of a carriageway, should be regular to satisfy the eye, and crossings and intersections required skill in setting out, if the good form of a road were to be maintained. In the longitudinal grading of new roads, straight lines or gradual curves should be obtained, and kinks and sharp angles avoided. If a new road could, by a slight alteration to its axis, be aligned to a church tower, a clump of trees, a shrubbery, or a distant hill, the vista obtained added a charm to it. The size and position of gullies, the design and position of lamp-posts, tramway standards, ventilating shafts, water columns, or other necessary obstructions, demanded a good deal of thought.

Where a new road had been constructed in a cutting, the new boundary should be studied. One occasionally saw a clumsy retaining wall which might have been made beautiful with a little consideration, or an earth bank which could have been graded better and finished off with turfs. Walls, fences, and railings which defined road boundaries, if carefully designed, contributed to appearance. In urban roads good effects could be obtained with pavings. Paving slabs and paving bricks could be laid in many different ways. Most old country roads possessed a fine setting with their grass margins, bordering hedges, and stately trees. Some of them had been widened, and in certain cases where the sheltering hedges had been sacrificed a new view of the country was revealed. If the disclosed view were not impressive a new hedge should be planted, and where old trees had had to be sacrificed new trees should be planted, either on the path or near it, and an occasional seat provided to afford rest and shade to wayfarers. In urban districts judicious tree planting added materially to the amenity of the roads.

Was it not high time that telegraph and telephone wires were in underground conduits, and the wearying and irritating telegraph poles banished from the highways? A good tree should be planted to mark the spot where a pole once stood.

Tarring of country roads had become a fairly general practice, and although black was a very restful colour for the sight, one hoped that some day waterproofed surfaces might be finished in tints at once restful to the eyes and gratifying to the colour sense. Colour effects could be obtained in paved streets, and there a contrast should be arranged between the carriageway and the footpath. In some towns one had observed the kerb and pavement of pink-tinted natural or artificial stone or brick and the carriageway of grey stone, a pleasing combination. In every case it was very important that there should be a sharp definition of colour where the carriageway and footway met. If luminous kerbs could be produced they would be of great assistance to pedestrians and motorists, for they would glimmer in the night. Certain stones when used as kerbs tended to show white at night. Whitewashing kerbs was practised in some districts.

Footpaths on country roads were not receiving the attention they cried aloud for in these days. Many of them were utterly neglected. So long as the carriageway had a better surface than the footpath pedestrians would choose the road, and accidents would occur. There was room for great improvement in footpaths throughout the land, and a lot of useful work might be provided for the unemployed in putting them in order.

There had been a vast improvement in road signs, but neither signs, signals, nor numbers were large enough to be legible to those motoring at the average speed. Place names should be set up in bold type at each end of villages and hamlets for the information of road users, and all road signs which were not lamplit should be painted with a luminous paint so as to be visible on dark nights. The selection of the right colour for painting posts, standards, shafts, columns, and fences deserved careful consideration.

Road Reconstruction.

MR. W. P. ROBINSON, A.M.Inst.C.E., County Surveyor of Surrey, in a paper entitled "Reconstruction of Foundations of, and Carpets on, Existing Roads," said in one case he had recently entirely reconstructed and widened a main road carriageway with a cement concrete surface. The old road varied in width from 13 ft. to 20 ft., with a surface-tarred water-bound macadam crust, whilst the new carriageway was 30 ft. wide, and the sub-crust and surface was entirely of Portland cement concrete 8 in. thick. In places the new surface had to be laid in half-widths in order to keep the road open for traffic. No foundation was provided other than the shaping of the ground to a camber of 1 in 50, but the subsoil was of loamy sand which was well rolled before placing the concrete, which was placed in two coats simultaneously, the lower one being 6 in. thick of 4 parts gravel, 2 parts sand, and 1 part cement, and the upper or surface layer being 2 in. thick of 4 parts gravel, 2 parts sand, and 1½ parts cement.

The concrete was laid in alternate bays not more than 35 ft. long by 20 ft. wide, and the reinforcement was generally 10 lb. per square yard, but the weight was varied according to the stability of the subsoil. The joints between bays were laid at an angle of 60 degrees to the kerb line, and the reinforcement was laid parallel to and at right angles to the joints, which were vertical butt joints afterwards filled with hot bitumen. Two mixing machines were employed, one for the lower course concrete and one for the upper course, so that the concrete could be laid as one course and operations on any one bay continued without cessation until that bay was finished. The concrete, after levelling off to the finished surface, was immediately covered with waterproof covers for about six hours, when the covers were removed and the surface of the concrete brushed with stiff brooms to remove all surplus scum, and the surface was immediately covered with 3 in. of wet sand, which was not removed for 28 days. Particular attention was given to the amount of water used, and he considered that was one of the most important points to watch in order to eliminate cracks. The correct proportion of water to give maximum strength in the concrete necessitated much more labour in ramming the concrete than had been expended on some concrete roads. Cubes 6 in. in all dimensions made from concrete taken from the mixing machines and actually used on the road withstood on test a crushing load of 78 tons, or an average load of 4,870 lb. per sq. in., at 28 days; the cubes, however, were not reinforced in any way.

Before any surface dressing was applied to the concrete, traffic was permitted to use it for some weeks, so that any loose mortar on the surface might be disintegrated and swept off. When the surface showed a smooth, hard, mosaic appearance, he preferred to apply a dressing of waterproofing material, and after experimenting with various substances, found that good results were obtainable by giving first a dressing of tar-oils, followed by either hot or cold bitumen, which would adhere better than if applied direct to the concrete.

The concrete carriageway referred to, which was 1½ miles in length and 30 ft. wide, had not yet shown any cracks, nor had the joints been chipped or affected in any way, although the road had been used almost daily for six months by a 14-ton traction engine hauling three trucks of gravel to the work. The surface was absolutely free from corrugation, the camber was 1 in 50, and curves of 900 ft. radius had been given a maximum super-elevation of 7 in. from kerb to kerb, which were of pre-cast concrete in 3 ft. lengths, and which might be set back when a widening of the carriageway became necessary. He adopted a concrete surface for the 30 ft. carriageway of the new arterial roads (15 miles) which were about to be constructed in the county of Surrey, as he was satisfied that an 8 in. layer of reinforced concrete, if properly laid and cured, would give greater satisfaction to the users of the road and be more economical in the end than a tarmacadam or bituminous carpet on a foundation of hardcore or pitched stone.

Mains in Public Highways.

"The Position of Mains in Public Highways" was the title of a paper read by MR. STEPHEN LACEY, B.Sc., Assoc.M.Inst.C.E., Distributing Engineer to the Gas Light and Coke Company, who said, in connection with the question of the position that mains should occupy in public highways, there were two chief points of view to be considered. In the first place it was obvious that mains should be laid in positions which would necessitate the least possible disturbance of the road either when the main was originally laid or subsequently. In the second place, attention must be paid by the undertaking owning the mains to the relative costs incurred by the adoption of alternative positions. It would generally be found that the two points of view led to conclusions which were not in conflict with one another.

In any distributing system, whether water, gas, or electricity, there were, in general, two classes of mains. There were trunk or feeder mains which were not connected direct to consumers' houses; and there were the smaller mains, fed by the trunk mains, from which the consumers were directly supplied. It was generally agreed that one service main should be laid in each footway of roads in urban

districts, where the number of service connections were relatively numerous and where the volume of traffic necessitated the laying of a high-class paving in the carriageways. The reason for that was that with a main in either footway the lengths of the services were reduced to a minimum, and new connections and repairs to mains could be made without disturbing the carriageway. It was impracticable to lay down a hard-and-fast rule defining the circumstances which warranted the laying of duplicate mains; each case must be considered on its merits. The provisional rule he adopted in setting out the distributing systems for housing estates developed since the war had been to lay single mains in subsidiary roads where the width of the carriageway was about 25 ft. or less, and to lay close to the kerb line in one of the footways, the idea being that if, in the future, a change in conditions should make it desirable to lay a second main, both mains and all the service pipes would then lie clear of the carriageway. When single gas mains were laid in one footway to supply customers on both sides of the road they had to be laid at a greater depth than usual, because service pipes conveying gas had to be laid with a fall to the main in order to provide for the collection and removal of water condensed from the gas.

In thoroughfares with wide footways it might be practicable to lay trunk mains as well as smaller mains in the footways, but usually the footways were not wide enough to do more than accommodate all the service mains and cables. But there was less objection to laying trunk mains under carriageways than the service mains, for the reason that as no service pipes were connected to them they were not often opened up after having once been laid.

The depth at which mains were normally laid below the surface of the road depended to some extent upon what they carried. Water mains had to be laid at such a depth as to be out of reach of frost; three feet was considered the minimum safe depth. The depth at which gas mains were laid was not limited in this way, and it was usual to lay at about 2 ft. 6 in. under carriageways and at 2 ft. under footways. It would appear reasonable to assume that the greater the depth at which a main was laid the less the risk of damage by vibration or other causes. But that assumption was not borne out by experience. The solidity and uniformity of the bed on which the pipes lay were the factors that had the greatest influence in establishing and maintaining conditions which ensured the stability of the mains under the stresses due to vibration, etc., and in his experience the depth at which the main was laid had proved to be of secondary importance.

The construction of subways had often been advocated as a remedy for the opening up of roads for alterations and additions to mains; but they could only be economically built under special conditions. An examination of the existing subways showed that they had practically all been built in new roads such as the Victoria Embankment, Holborn Viaduct, and Kingsway, which had formed part of great reconstruction schemes in areas already highly developed. Schemes to build subways in existing roads already congested with mains would involve not only the cost of building the subway but the cost of diverting the existing mains. That would certainly prove to be prohibitive.

It must be borne in mind when discussing the question of the position of mains in public highways that the distributing systems of water and gas undertakings in particular had not been laid down in the last few years, but were to a great extent heritages from the past which could only be slowly and laboriously modified to conform to present-day requirements. The settled policy of all progressive undertakings owning mains under public thoroughfares was to take every opportunity afforded by the re-paving works of road authorities to overhaul and modernise their plant. New mains were then laid in the footways where possible and superfluous mains and service pipes under the carriageways thrown out of use. The importance of ensuring that that work should be carried out thoroughly and expeditiously was becoming more and more generally recognised. That being so, the cordial co-operation of road authorities and the undertakings, which was essential to successful working, followed as a matter of course.

Bridge Construction.

In the course of a paper entitled "General Construction of Bridges," presented by LIEUT.-COLONEL J. F. HAWKINS, O.B.E., M.Inst.C.E., County Surveyor of Berkshire, and CAPTAIN C. G. MITCHELL, A.C.G.I., B.Sc., Ministry of Transport, it was stated that in the last few years the number of mechanically-propelled vehicles had increased very rapidly, and the unit loads carried by them were much heavier than was contemplated even a few years ago. It was noticeable, too, that the average speed of these heavy vehicles was much greater than formerly, probably due to improved road surfaces. This revolution in traffic conditions had found a very large number of bridges to be quite inadequate as regards strength and width, and in the past two or three years very extensive schemes of bridge reconstruction had been put in hand. The improvement in roads generally preceded the improvement in bridges, and for this reason there were still a very large number of bridges not fit for present-day loading, and these provided a serious problem for the highway engineer.

During the last two or three years the Ministry of Transport had assisted to a certain extent in determining a minimum standard of loading. Previously every engineer had his own load for use in designing bridges, and it was obvious that that practice had great disadvantages. The standard load of the Roads Department, Ministry of Transport, was based on a 20-ton engine drawing three 13-ton trailers, with 50 per cent. added for impact. It was thought that that loading would provide for all normal traffic conditions for very many years to come. The 50 per cent. allowance for impact had given rise to a certain amount of criticism, and it was reasonable to argue that that impact allowance should be made to vary with the span. Impact on a road bridge was extremely difficult to determine owing to the very large number of variables. The condition of road surface, material of road surface and foundation, speed of vehicle, tyres, sprung and unsprung weight of vehicle, type of bridge and material of which the bridge was constructed, are some of the variables even when the span of the bridge is constant. Of these variables the condition of the road surface was not the least important, and it was essential to safeguard our bridges that particular attention should be given to this point. If a rational expression for impact on highway bridges could be determined and demonstrated there was no doubt that it would find general acceptance.

One effect of the standard load had been to eliminate, for all practical purposes, the type of bridge having two main girders with the deck supported on cross girders, except where very long spans were involved. That was, no doubt, due to the requirement that standard trains should be placed on the bridge side by side, one train for every 10 ft. width of carriageway. As an extreme example a road bridge having a 40 ft. carriageway and two 10 ft. footways would necessitate a live load of 88 tons being carried on one cross girder 60 ft. long.

SIR HENRY MAYBURY, in summing up the discussion, impressed on those engaged in road work the importance of getting good value for money, and of planning on economical but sound lines. A calculation made in connection with the classified roads of the country showed that if it were possible to save in road works 1d. per superficial yard it would represent £1,800,000 a year.

Private Roads.

MR. EDWARD WILLIS, Borough Engineer and Surveyor, Chiswick, in an address on "Estate Road and Private Street Construction and Standardisation," said the subject of town planning was intimately connected with private street and sewerage work, and therefore the designer of estate roads should have a knowledge of the foundation work of town planning; he should also have sufficient vision to anticipate the future of the area for which he was called upon to design the estate roads, and he should also bear in mind whether such roads were likely to be dedicated to the public use in the future, or be mainly retained as private roads.

Under the Town-Planning Act Regulations, the Ministry of Health quite recognised that the old fixed minimum width of 36 ft. or 40 ft. usually prescribed in by-laws, with greater widths of 50 ft. and 60 ft. under special circumstances, were not desirable under all conditions where new estates were being laid out, and a much better effect could often be obtained by the provision of *culs de sac* of narrow widths, roads with turning places, wider paths, grass margins, squares, and similar variations of the ordinary by-law road.

It would, therefore, appear desirable briefly to set forth a few suggestions as to roads which might be suitable for the ordinary building estate.

(1) Where reasonably straight or curved roads were desirable as main thoroughfares following the contours of the land, the houses adjoining such roads should not be brought out to the boundary of the road, but should be set back to building lines not less than 120 or more than 200 ft. apart, excluding any architectural ornaments, such as porches, bay windows, etc.

(2) Where roads were never likely to be subject to main through or cross traffic, the ordinary by-law width of 36 ft. to 40 ft. should be ample as the initial highway width, but since only the future could determine what might become an inter-communication road, he strongly advocated building lines set back about 20 ft., or more, giving a minimum width between buildings of 80 ft. Probably the by-law road usually specified with footways each one-fifth or one-sixth of the total width of highway would be the most convenient for traffic, both vehicular and pedestrian.

(3) Where roads could not be usefully adopted for even local traffic, then *culs-de-sac*, squares, or other similar methods might be adopted with carriageways of limited width, but with the provision of places for turning. It would, however, be undesirable to accept a total width of highway below, say, 24 ft., if a carriageway and footways were to be constructed, even in such short roads as a general rule, and he would emphasise the desirability of building lines being set back to provide 80 ft. between dwellings when possible.

(4) The 16, 14, or 13-ft. carriageways recently adopted for continuous roads in the lay-out of various housing schemes were not wholly desirable, but the two-vehicle standard is a *sine qua non* for all roads exceeding 150 ft. in length, and the least unit vehicle widths he had consistently advocated were—(*a*) 8 ft., for the lightest class of road (local); (*b*) 9 ft., for the intermediate class of road (Class 2); (*c*) 10 ft., for the main arterial roads (Class 1).

(5) In the lay-out of an estate not only should the contours have an important bearing upon reduced gradients, ease of traffic, sewer routes, etc., but careful design generally should lead to effective harmony with adjoining estates, and with slight deviations good aspects and vistas might be worked into the general plan.

PUBLIC WORKS EXHIBITION.

THE Public Works, Roads, and Transport Exhibition, held at the Agricultural Hall from November 19 to 26, formed a comprehensive collection of the machinery and materials used in modern road construction.

A selection of samples of their road surfacing materials was shown by the Limmer & Trinidad Lake Asphalt Co., Ltd. (34, Victoria-street, S.W.1), including Trinidad Lake bitumen, Trinidad asphalt-macadam, "Lithocrete" on Trinidad asphaltic concrete, compressible rock asphalt, "Lithofalt" paving blocks, and "Lithocrete" paving, Hutchinson's testing apparatus and instruments for standardising bituminous road materials, &c., and mastic asphalt as applied to modern buildings, were also shown.

Messrs. Tuke & Bell, Ltd. (27, Lincoln's Inn Fields, W.C. 2), exhibited a 5-ton 6-wheel lorry, fitted with "Constable" patent gravity hand-operated end-tipping gear and patent automatic tail-door; a 1-ton capacity lorry, with end-tipping body with patent gravity hand-operated end-tipping gear, on 1-ton chassis; a "Carlton" revolving sewage distributor; and "Grip" patent manhole-cover and frame, for heavy road traffic.

The exhibits of the Ingersoll-Rand Co., Ltd. (165, Queen Victoria-street, E.C. 4), consisted of air compressors, "Leyner" sharpeners, oil furnaces for forge shops, used in conjunction with "Leyner" sharpeners; samples of shanks and bits and set hammer samples, made up on "Leyner" sharpeners; "Jack-hammers," and numerous other devices.

Messrs. Stothert & Pitt, Ltd. (Orchard-street, S.W. 1), exhibited one of their No. 16 size combined stone drying and mixing plants. The machine is fitted with separate drying and mixing drums, and designed for giving under normal conditions an output of 60–80 tons per day. The drying drum is of the "Victoria" type, the mixing drum being of the tilting type. The combined plant is of the portable type, fitted with end loading device for feeding from ground level. The firm also exhibited one of their latest pattern tilting "Victoria" concrete mixers of 5 cu. ft. mixed batch capacity. This machine is fitted with elevating loading hopper, water tank, and driven by a petrol engine.

The stand of the Ransome Machinery Co., (1920), Ltd. (14–16, Grosvenor-gardens, S.W.1), exhibited (1) Batch type combined tar macadam dryer and mixer with double drying drum and fitted with pump for the binder, with an output of 2½ in. tar-macadam at the rate of 6 tons per hour. This plant is made in three portable or stationary sizes, with outputs of 4, 6 and 12 tons per hour; and in two stationary sizes, with outputs of 20 and 30 tons per hour. (2) A light-weight tilting drum concrete mixer with barrow hoist, mounted on two large wheels to enable it to be run about by two men. This machine is self-contained with 7 cu. ft. elevating skip, water tank and 3 h.p. petrol engine, and turns out 40 mixed batches of 5 cu. ft. per hour. (3) A new block-making machine was also shown, with three moulding boxes mounted on a low revolving frame. While the first mould is loaded, the second is pressed, and the finished product in the third box is taken away. The machine will make solid or hollow, plain or ornamental blocks, bricks, slabs, copings, angles, &c., in innumerable shapes and any dimension within 18 in. by 9 in. by 9 in. Hoisting winches, steel sheet piling, concrete pile helmets, and steel hand carts were also shown on this stand.

Messrs. Ruston & Hornsby, Ltd. (Lincoln), exhibited a No. 6 crane navvy, mounted on caterpillar tracks. This machine has a cutting pressure on teeth of 6 tons, and a bucket capacity of 7–8 cub. yds. It is fitted with three sets of engines—the main engine operating the hoisting and travelling motions; racking engines; and slewing engines. The boiler is designed for 125 lb. per sq. in. The caterpillar tracks have cast steel track pads and are specially designed for standing up to hard usage. There are three operating levers and one foot pedal only, thus making it possible for one man to work the machine on light and medium outputs. An 8-ton tandem motor roller, a cold starting oil engine (42 b.h.p.), pumping plant, a 9½ b.h.p. portable petrol-paraffin engine, a centrifugal pump, and a helical centrifugal pump were also shown by this firm.

The Walker-Weston Co., Ltd. (Empire House, 7, Wormwood-street, E.C. 2), exhibited samples and models of their system of interlocked double-layer reinforcement. This system originated at the Port of London Authority in 1917, and was used by the Port of London Authority in the construction of King George V and Victoria Docks, for concrete surface work, including roads, quay-ways, floors, &c. The exhibits included a model of a reinforced concrete road, showing location of reinforcement in the concrete, and some illustrations and drawings of method of interlocking concrete joints. In addition, a film showing construction of Manchester concrete roads and the Dartford-Erith road, Kent, laid on the "Walker-Weston" system, was exhibited.

Messrs. Builders & Contractors Plant, Ltd. (51, Tothill-street, S.W. 1), made a special feature of the B.C.P. combined stone dryer and mixer, of a small portable size, fitted with an oil burner. This machine was specially designed for small road repair jobs. A petrol road roller, a petro flame heater for patching, a new road gritting machine of a small size suitable for gritting tarred roads or for rendering the surface of a wet road less slippery, the "Roll" concrete mixer, two-wheel tipping carts, a tar sprayer with a new patent steam driven pump, a complete working model of crushing and screening plant together with an elevator, and tar and bitumen boilers were also shown.

Messrs. Millar's Timber & Trading Co., Ltd. (Pinners' Hall, E.C. 2), showed the following machines in operation under their own power: (1) "Cummer" asphalt plants and accessories, which are supplied in either portable or stationary units for outputs of approximately 8, 12, 18, 20 tons of bituminous sand carpet per hour; or 800, 1,200, 1,800 2,000 sq. yds. 2 in. sand carpet per day. (2) "Jaeger" mixers, equipped with automatic tipping water tank, automatic loader, and hoisting drum. (3) Tandem steam road rollers, with a low centre of gravity, supplied in eight sizes, 2 to 10 tons in weight. (4) Steam shovels, with separate engines for hoisting, slewing and crowding. (5) The "Tructractor" motor truck, with tip body of 24 to 30 cub. ft. capacity, for handling road material. Portable pumps, wagon loaders, large melting tanks, air compressors, rock crushers, &c., were also exhibited on this stand.

Mr. Frederick Parker (Viaduct Works, Catherine-street, Leicester), exhibited (1) A multiple stone drying plant of the two-tube type, capable of dealing with upwards to 100 tons per day, complete with hot air exhaust fan, furnace, &c. (2) Asphalt and tar-macadam trough mixer, of two-thirds cub. yd. capacity per batch for dealing with small material for surface or carpet work. (3) A concrete mixer, of 7 cub. ft. capacity per batch of unmixed material, complete with loading hopper, automatic water tank, and power unit for driving. (4) A concrete mixer, of 4 cub. ft. capacity per batch, combined with a 2-h.p. petrol engine. (5) A 16 in. by 9 in. solid body type stone breaker and ore crusher, with an output approximately of 8–11 tons per hour. (6) A 12 in. by 4 in. solid body type granulator, capable of dealing with 2½ to 3½ tons per hour down to ¾ in. material.

Messrs. Richard Hill & Co., Ltd. (Middlesbrough), exhibited samples of "Maxweld" electrically welded steel fabric in varying strengths and spacings. A sample of double layer fabric, designed to provide for flexure, contra-flexure and shear stresses, which are met with when slabs are constructed over made-up or unstable ground, was shown. This firm also exhibited a new product in the shape of electrically welded fabric made from mild steel rods to British Standard specification. The rods are taken from the rolling mills and without any further process are manufactured into fabric.

Messrs. Drummond Bros., Ltd. (Rydes Hill, Guildford), exhibited a selection of their "Willing Worker" plant. The "Willing Worker" concrete mixer is a portable batch mixer, with a capacity of 3 to 6 cub. yds. per hour, driven by 3 b.h.p. paraffin engine, and arranged in a steel trolley. The "Willing Worker" diaphragm pump is driven by a 3 b.h.p. paraffin engine, and arranged as a complete outfit on a steel transport trolley. Its capacity is 5,000 gallons per hour. "Willing Worker" duplex force pumps and drag saw outfits were also shown.

The outstanding feature of the stand of Messrs. Winget, Ltd. (24, Grosvenor-gardens, S.W.1), was a quarter-size model of the "Wonder Plant" for the automatic production of tar-macadam. This is a new stone-drying and tarring plant which takes the crushed stone and dries it, frees it from dust, dips it in tar or bitumen, and finally loads it into a railway truck, practically without any handling by man labour from start to finish. The plant is capable of producing 100 tons per eight-hour day. Practically all the exhibits on this stand were seen at work. They included a pressure machine for manufacturing concrete blocks and slabs, a portable engine-driven crusher, mixers suitable for wet or semi-wet concrete, and also, by the addition of special blades, tarred or bituminous products. A new portable conveyor was also shown.

Messrs. Johnson's Reinforced Concrete Engineering Co., Ltd. (Manchester), drew special attention to their new pattern steel wire lattice reinforcement, as used for concrete roads, culverts, tanks, floors, roofs, walls and similar construction, for which is claimed rigidity without interference with the quality or continuity of the main tension wires. "Keedon" fitments, used in conjunction with ordinary round mild steel bars for concrete beams, columns, &c., were shown, and also "Bricktor" reinforcement for brickwork, partition slabs, concrete blockwork, &c., where extra strength and lightness of construction are required.

Granite macadam from their various quarries, kerb, channel, setts, &c., granite for architectural, monumental, dock, harbour and engineering work, slag (tarred and untarred), "Silex" brand Yorkstone for pavings, &c., "non-slip" stone footway paving, artificial stone, &c., were exhibited by Messrs. Brookes, Ltd., of 65, Victoria-street, S.W.1.

The exhibit of the British Reinforced Concrete Engineering Co., Ltd. (1, Dickenson-street, Manchester), consisted of a large number of photographic enlargements illustrating road work in which B.R.C. fabric has been used. The exhibit also included a roll of B.R.C. fabric and a concrete slab showing the position of the fabric in the road.

Messrs. C. A. Peters, Ltd. (Stores-road, Derby) showed their "Carbolineum" wood preservative, "Peteroid" cement specialities, "Peteroid" coloured cements, "Peteroid" special cements, "Peteroid" stucco and terrazzo grains, sands, &c., "Peteroid" waterproofing powder, and "Peteroid" fluoric crystals for hardening old floors and all lime or concrete work.

The Phœnix Engineering Co., Ltd. (Phœnix Works, Chard), exhibited a bitumen heater with a capacity of 320 gallons; a continuous heating road tar spraying machine of 160 gallons capacity; a pot-hole repairing outfit; a flood-gate hand lift contractors' trench pump; and a hand lift contractors' diaphragm pump.

The exhibit of The Expanded Metal Co., Ltd. (York Mansion, Petty France, Westminster, London, S.W.1), consisted of samples of the company's various products; a model section of kerbing and road; photographs of municipal works carried out on its systems; "Expamet"

reinforcement for roads; expanded steel sheet reinforcement; lathings for plasterwork, and "Exmet" reinforcement for brickwork, concrete blockwork, &c.

Messrs. Ferodo, Ltd. (Sovereign Works, Chapel-en-le-Frith), exhibited models showing "Ferodo" fibre and bonded asbestos fitted to various types of brakes and clutches, and specimens that had been in use for long periods, showing the resistance to wear. Further exhibits were samples and models of "Ferodo" patent stair treads, and "Feroleum" fibrous flooring.

A large assortment of road materials and building materials, including granite setts, kery, slag, bricks, pipes, roofing tiles and slates, &c., was exhibited on the stand of Messrs. Ernest Matthews & Co., of West Africa House, Kingsway, W.C.2.

The Helical Bar & Engineering Co., Ltd. (72–74, Victoria-street, S.W.1) exhibited Cherbourg quartzite of various sizes for macadam and chippings for road surface binding and concreting purposes, spalls for breaking, macadam, chippings, helical bars for ferro-concrete work, with a continuous mechanical bond to provide security against slipping were shown, and also mild steel round bars, all diameters 1–16th to 1¼ in. with lengths up to 40 ft., and a woven wire concrete reinforcement.

Messrs. William Shepherd & Sons, Ltd. (Milkstone, Rochdale), exhibited samples of asphaltic slag for roads, samples of asphaltic limestone for playgrounds, footways, carriage drives, hard tennis courts, floors, yards, and general surfacing work; lump slag for pitching and foundations; broken slag, adhesive composition for cementing wood block and boarded floors, and tramway parging blocks.

The exhibit of Messrs. Tangyes, Ltd. (Cornwall Works, Birmingham), included a 25 b.h.p. heavy-oil engine, cold-starting type, suitable for use with residual oils, fuel oils, refined oils, or adapted to use tar oils, alcohol, &c.; a three-throw vertical treble ram pump, four types of "Tan-Gyro" centrifugal pumps, and one of the latest pattern single ram pumps, lifting tackle, &c., were also exhibited.

THE LONDON ASSOCIATION OF BUILDERS' FOREMEN AND CLERKS OF WORKS.

THE London Association of Builders' Foremen and Clerks of Works held their annual dinner at the Holborn Restaurant, Kingsway, on November 24, under the chairmanship of Mr. G. C. Hans Hamilton.

After the loyal toasts had been duly honoured, the CHAIRMAN proposed "The London Association of Builders' Foremen and Clerks of Works," and said he had to apologise on behalf of Sir G. C. Hamilton, who, owing to the present political contest, had been prevented from taking the chair. The London Association of Builders' Foremen and Clerks of Works was too well known for him to go into unnecessary details, but the secretary had given him certain very impressive facts. It was founded in 1894, and its objects were the promotion of friendly and social intercourse by means of frequent meetings; to assist members when in want of employment, to provide pensions; to provide an insurance fund against death; to provide an unemployment benefit fund; to assist members financially by grants from the funds. The pensions fund asked for special assistance: it paid out a sum of £420 yearly. The members of the Association were the lieutenants and non-commissioned officers of the building world. Not only was it their duty to instruct the men under them, it was often necessary for them to instruct the men above them. The principal object of their presence that night was to make the Association a success. Hard times made it difficult to subscribe as one would wish, but he made an urgent appeal that the guests would subscribe in order to make the dinner of the London Association a great success.

In response, the PRESIDENT of the Association said it was a very great pleasure for him to reply to the toast. He thanked all who had come to their assistance in the difficulties they had found themselves a few days back. The chairman had spoken of the principal aims and objects of the Association; but he would emphasise the benefit which accrued to members of their industry by joining an Association such as theirs. A general foreman, or clerk of works, had all to gain by becoming a member, as they catered for the educational side, in addition to the social side. This was only accomplished by giving lectures, visits to works of interest, and discussions on trade matters generally. In this direction their secretary had been very energetic, and had allowed very few opportunities to slip by him which might advance the knowledge of their members. It was his ambition to induce any architect, or professional man, who could be interested in their Association occasionally to read them a paper on a subject of general interest; and he felt sure he would be only too pleased to make arrangements for the success of such an object.

MR. F. SANDERSON proposed "The Building Trade," and said it was one of the oldest in the world, and had very great responsibilities in the country.

MAJOR RICE, in reply, said no doubt better times were in store for the industry, but they did not know how long that would be.

Other toasts included "The Architects and Surveyors," proposed by MAJOR A. VIGOR, and responded to by MAJOR N. OLIVER; "The Visitors," proposed by the VICE-PRESIDENT, and responded to by MR. W. MITCHELL; and "The Chairman," proposed by MR. BEN CARTER.

EXPANSION OF BUILDING AND CONSTRUCTION IN INDIA.

[FROM A SPECIAL CORRESPONDENT.]

THE "BUILDER" has always enjoyed an Indian circulation among prominent firms and officials, and its announcements are read with interest. Orders are sent through English firms and merchant-shippers in London, Liverpool, Glasgow, Manchester, etc., who pay and ship the materials. Indian constructors, engineers, builders, and architects are eager to secure sole-agents for suitable articles. Activity prevails everywhere and buyers are busy.

The construction of road railways on an extensive scale is to be taken in hand by the Gwalior State. Estimated cost of the railway, £800 per mile. The new reservoir project in the South Arcat District of Madras will, among other things, irrigate 25,000 acres of new land. Electric schemes are contemplated in Mysore to meet the demand for more power. As the City of Ahmedabad is extending, substantial additions are to be made for electricity, including buildings for three 750 B.H.P. generating sets. The last Punjab public works department returns show an expenditure of £1,363,950 on military works, civil works, post and telegraph works, archæological works, civil and deposit works. The new cantilever bridge between Howrah and Calcutta will, it is estimated, cost £6,380,000. A South Indian electric power project is being considered by the Travancore Government. Trincomalee as a naval store base instead of Bombay will gradually develop as a commercial port. It is one of the greatest natural harbours in the world. Large oil tanks and buildings are being erected.

Great activity prevails in introducing latest appliances and materials. An English provincial maker has six large firms in Calcutta stocking steam and power pumps of every description for contractors. American steel construction work is being introduced; also American tools and malleable fittings. Jointless flooring that can be laid upon wood or cement, fire resisting, impervious to water, white ant proof, highly suitable for railway carriage floors, is selling well. Also roofing for concrete: tiled timber and corrugated iron roofs are successful roofings for railway carriages. Demand exists for enamels, varnishes for floors, paints in all colours, wallboard for ceilings and partitions, flooring in dark green, red or slate colours, guttering, damp coursing for basements, steel rolling shutters. Business is done in ironwork paint against which rust is powerless. White or coloured Italian marble for builders, contractors, and engineers. Suppliers of suitable materials would do well to announce them.

Apprentices in Government workshops usually have a five-years' course; age limit 19. There is evidence that the old idea in India that manual labour and workshop duties are degrading and beneath the dignity of boys of good families is slowly breaking down. The workshop staff has had to use a good deal of persuasion and humouring.

Colombo municipal workshops have had machinery introduced, haulage plant, lorries; also steam street water sprinklers, which are cheaper than bullock-drawn vehicles. Up to March 31, 1923, registered in India were: 3,666 heavy motor vehicles, 37,903 motor cars, and 13,997 motor cycles. It is computed that one motor lorry is equal to 20 bullock carts.

BOOKS RECEIVED.

STRUCTURAL STEEL. (London: R. A. Skelton & Co., Ltd.) Price 5s. net.

CITY PLANNING AND ZONING. By Theodora Kimball. (Cambridge: Harvard University Press). Price 16s. net.

AIR RAID DAMAGE IN LONDON. Prepared by E. C. P. Monson and Ellis Marsland. (London: Offices of the British Fire Prevention Committee.) Price 5s. net.

PENZANCE AND THE LAND'S END DISTRICT. By J. B. Cornish and J. A. D. Bridger. (London: The Homeland Association, Ltd.) Price 1s. 6d.

THE DECORATION AND RENOVATION OF THE HOME. By A. S. Jennings. (London: W. R. Howell & Co.) Price £2 2s.

STREETS, ROADS AND PAVEMENTS. By H. Gilbert Whyatt. (London: Sir Isaac Pitman & Sons, Ltd.) Price 2s. 6d. net.

SOME ACCOUNT OF THE HISTORY OF PETERSFIELD. By E. Arden Minty. (London: John Lane, The Bodley Head, Ltd.). Price 3s. 6d. net.

ITALIAN RENAISSANCE ARCHITECTURE. By Georges Gromort. (London: John Tiranti & Co.). Price 17s. 6d.

SCANDINAVIAN ART ILLUSTRATED. By Carl Laurin, Emil Hannover and Jens Thiis. (London: Oxford University Press.). Price 35s. net.

ARCHITECTURAL BUILDING CONSTRUCTION. Vol. II, Part 2. By Walter R. Jaggard and Francis E. Drury. (Cambridge: At the University Press.) Price 18s. net.

A FIRST COURSE IN BUILDING CONSTRUCTION. By Bryson Cunningham. (London: University Tutorial Press, Ltd.). Price 4s. 6d.

PLANE AND GEODETIC SURVEYING FOR ENGINEERS. By David Clark. (London: Constable & Co., Ltd.). Vol. I, Plane Surveying, 26s. net; Vol. II, Higher Surveying, 25s. net.

ORIGINAL DESIGN. By S. J. Cartlidge. (London: Chapman & Hall, Ltd.). Price 6s. net.

THE NEW LAW OF PROPERTY. By Alfred F. Topham. (London: Butterworth & Co.) Price 15s. net.

OLD OFFENDERS AND A FEW OLD SCORES. By E. W. Hornung. (London: John Murray.) Price 7s. 6d. net.

BUNGALOWS. By W. I. Chambers. Price 2s. 6d.

COMMERCIAL MOTOR VEHICLE SHOW.

THE Commercial Motor and Roads Development Exhibition, now being held at Olympia, is so full of interesting exhibits that the following details can only give a slight idea of the extensive range of the exhibition. Berliet commercial vehicles, shown by Automobiles M. Berliet, of 40, Sackville-street, W.1, are represented by eight exhibits, of which four are chassis and four complete vehicles. The chassis are a 15-cwt., 30-cwt., 2½-tonner and a 6-tonner, and amongst these the 2½-tonner has the distinction of being equipped with four-wheel brakes. The 6-tonner is worm-driven, whereas all the others have spiral bevel gears as their means of final drive. The Berliet chassis will be found, upon examination, to have that neat and clean appearance which is typical of the majority of French chassis, a quality which is obtained as the result of careful forethought. It does not necessarily involve any decrease in accessibility. The complete vehicles include a saloon omnibus on a 30-cwt. chassis, a single-deck omnibus on a similar machine, an ambulance built to Local Government Board specifications, and a box van, the two latter being on 15-cwt. chassis.

The Bristol Tramways and Carriage Co., Ltd., of Bristol, show one chassis of each of the two models which they manufacture, as well as one complete passenger vehicle mounted on each type. In addition, there is a Bristol engine with the base of the crank-case removed so as to show the details of its construction. There is also a collection of finished parts as fitted to Bristol chassis, and a gearbox and a change-speed unit electrically operated and demonstrating the Bristol patent selector gear. Both the exhibits at Olympia of complete vehicles are passenger machines; one, on the 40 h.p. chassis, is a single-deck omnibus designed to carry 30 passengers and having front and rear entrances. The interior is divided into two compartments, that in the rear being set apart for passengers who desire to smoke. This vehicle is very well finished with domed wings and driver's cab with three-piece windscreen; it is equipped with electric lighting and runs on solid tyres. The bus on the 30 h.p. chassis is of the forward-dash type and has seats for 20 passengers.

The 20-cwt. to 25-cwt. chassis shown by Karrier Motors, Ltd., Huddersfield, is attracting a lot of attention. The construction embodies the unit-mounted engine and gearbox, the former being of 18.2 h.p. and the latter affording four speeds forward and a reverse. There is on this stand a pay-as-you-enter bus, with a capacity for 20 seats, mounted on a standard 2-ton 25 h.p. chassis, and also a special model of this chassis with 9-ft. wheelbase, and forward dash and body designed to be useful for the carriage of mineral waters and similar commodities. Other exhibits include model KV, which is designed for 5-ton or 6-ton loads, and JH, which is a 3½-tonner. The new 30-cwt to 40-cwt. chassis, which is built to the W.D. subsidy specification, is also displayed.

Renault, Ltd., have a very full stand of exhibits. The smallest is the 8.3 h.p. 5-cwt. chassis, which is shown as a boxvan and as a tradesman's van. The 13.9 h.p. appears four times on the list of exhibits, once as a 10-cwt., the other three being 15-cwt. Then there is the 24.8 h.p. chassis, which also appears in two capacities. This is shown in chassis form, the smaller having a capacity of three tons and being designed to have the engine beneath the driving seat, that is to say, it is of the forward-dash type; the other is for 3½ tons. A tipping wagon is shown on the 5-ton 24.8 h.p. chassis, whilst the twelfth and largest exhibit is the Renault 10-ton trailer and tractor. This also is equipped with a 24.8 h.p. engine, and the overall length of this exhibit is 31 ft. 5 ins.

The makers (Walker Bros.) of Pagefield motor vehicles exhibit an example which shows their ingenious system of refuse collection, which, introduced at Southport, is now being employed by municipal authorities all over the country. For the complete utilisation of this system, three horse-drawn collecting wagons, or containers, and one motor lorry are required. The container has a capacity of about 200 cubic ft.—say, three tons—and is designed to have a low loading level. When one of the containers is full it is taken by the horses to the motor wagon, upon which it is hauled by special arrangements of sliding ramps and winch. The motor lorry then quickly removes the loaded container to the tip, empties it and returns to pick up another full one. No special picking-up stations are necessary, as the exchange can be made in any ordinary road without interfering with traffic. The system is really a combination of horse haulage and motor traction, each in its most economical form, and it is, moreover, cheap and highly efficient. At Southport an actual saving of 1s. 11½d. per house cleared has resulted from the adoption of this system. A 3½-ton short wheel base chassis is also exhibited.

The Leyland exhibit is a most comprehensive one, embodying no fewer than seven vehicles, one engine and two models, representative of all types of Leyland production. The new 30-cwt. chassis appears fitted with a 'bus body and also equipped as a brewers' dray. The former has seats for 20 passengers, and is a typical example of this class of vehicle, for which the Leyland Co. have acquired a high reputation. The brewers' dray consists of an open body with the usual stanchions and chains which one associates with this type of vehicle. Another exhibit is an engine fitted to the new 30-cwt. chassis. This power unit is interesting on account of the advanced features of design, such as hemispherical cylinder heads and triple eccentric drive for the overhead camshaft, which are incorporated in its construction. Unusual flexibility as well as fuel economy are claimed for the power unit. The two models shown are an R.A.F. 4-tonner and a Leyland chassis fitted with a tipping body operated by Bromilow and Edwards gear.

The General Motors, Ltd., advertise that they are unable to show on their stand at Olympia a full range of their products, and although this statement is perfectly true, yet it cannot be denied that there are on their stand, and on those of firms allied with them in some way or other, a very representative selection of Buick, Chevrolet and G.M.C. commercial vehicles. They comprise a Buick 15-cwt. chassis and an attractive 15-cwt. van on the same substructure. There is also a traveller's brougham, neatly designed to give the same appearance as a private brougham and equipped with a wide door at the rear and long vestibule doors each side of the driver, and this also is on a 15-cwt. chassis. Amongst the G.M.C. exhibits of particular interest which may not be found on the stands either of General Motors, Ltd., or on that of General Motors of Canada, Ltd., mention must be made of the 15-ton G.M. tractor which is being shown by R. A. Dyson & Co., Ltd.

There are three vehicles on the Clayton stand, one of each principal type manufactured by Clayton Wagons, Ltd., these consisting of one electric vehicle and two steam wagons, one of the latter being an undertype and the other an overtype. The special features of Clayton electrics are the arrangement of the single motor unit, which has, combined with it, the countershaft bearings and the housing for the gears. The advantage of this construction is that there can be no trouble due to faulty alignment. The particular vehicle shown on the stand is a tipping wagon of the "run-back" type and fitted with steel body.

Those who are interested in the latest type of fire-fighting apparatus will be well advised not to miss the Dennis stand, upon which is staged, as one of this company's exhibits, a chassis of one of the latest type 60-70 h.p. 500-600 gallon fire-engines, equipped with the Dennis patent multi-stage high-pressure fire-pump, which, amongst many interesting features is notable on account of its light weight, having in mind its capacity. The pump is driven by gearing which is mounted at the front end of the chassis gearbox and enclosed in an aluminium casing, the drive from this gear to the pump itself, which is, of course, located at the extreme rear of the chassis, being effected by a long cardan shaft, which is equipped with a flexible disc joint at each end, and is supported at about the middle of its length in a journal which is carried by a cross-member of the main chassis.

The Sentinel exhibit includes no fewer than five vehicles, all of them being new models, inasmuch as every chassis shown embodies the new Super-Sentinel patent engine, which incorporates in its construction, amongst other novel features, a differential, which is built up with the crankshaft. This is a most interesting feature; the gear consists of a number of shafts and spur wheels disposed in and around the crankpins and webs so as to give true differential action. An important point in its construction is the means whereby the differential is prevented from functioning until a difference of 10 per cent. or 15 per cent. of effort as between the two chain sprockets is felt. It is claimed that this arrangement abolishes 90 per cent. of the tendency to skid. A full-size working model of this differential gear is on the stand, and is well worthy of close investigation.

The exhibits of the Four Wheel Drive Lorry Co., Ltd., comprise one standard chassis, a three-way hydraulic tipping lorry and a tipping trailer, a long wheelbase chassis with flat platform body, and a fire-engine. The tipping lorry and trailer are equipped with Bromilow and Edwards three-way hydraulic tipping gear, which can be operated from the driver's cab on the lorry. The trailer is coupled to the lorry by a telescopic tube with ball joint connections. Both the bodies have sheet-steel floors, so as to facilitate tipping the load, and the design in general has been improved so that the loading level is now 3 ins. less than that which has hitherto been customary. It is important to note that both the lorry and trailer are equipped with Westinghouse air-brakes, a feature of which is that, should the trailer become accidentally detached from the lorry, the brakes are automatically applied to both vehicles.

The outstanding exhibit of Henry Garner, Ltd., Birmingham, is undoubtedly the Garner Saloon Busvan. This is designed to be used, on the one hand, as a comfortable passenger-carrying vehicle; or, on the other hand, solely for the conveyance of goods; or, again, intermediately for carrying both passengers and goods without inconveninence to the former or detriment to the latter.

The Dodge Bros. exhibit includes two chassis and two complete vehicles. The former are the 24-35 h.p. Dodge chassis and the Graham Bros.' 30-cwt. truck chassis, which is fitted with Dodge Bros.' power plant. The small chassis has a four-cylinder engine of 3⅞ ins. bore by 4½ ins. stroke, three-speed gearbox with central change, multi-disc clutch and spiral-bevel gear. All the brakes take effect on the rear wheels, which are of the wooden artillery type, and accommodate 32-in. by 4-in. straight-sided cord tyres. The equipment includes electric lighting and starting, speedometer and tool kit. The other chassis, of course, has the same power unit, but its tyre sizes are 33 ins. by 4½ ins. on the front and 36 ins. by 6 ins. on the rear. The 15-cwt. panel-type van will be shown on a Dodge chassis, and a saloon bus on the Graham. The latter is by Hoods & Bodies, Ltd., and is of the pay-as-you-enter type. Its capacity is for 16 passengers.

The business of monumental mason carried on by the late Mr. James Gullett, of Holborn-place, Plymouth, is being continued by Mrs. Margaret Annie Gullett and Messrs. James Gullett and John Ronald Hay Gullett.

TYNE AND BLYTH DISTRICT BUILDING TRADES EMPLOYERS' FEDERATION.

AT the annual dinner of the Tyne and Blyth District Building Trades Employers' Federation, held on November 22, at the Grand Assembly Rooms, Newcastle, Mr. Thomas Bertram occupied the chair.

The Chairman proposed the toast "Our Governing Authorities," and said he believed that to-day there rested upon the governing bodies a greater responsibility than had ever before been known in the history of the nation. They were, however, worthy of confidence being reposed in them. The houses built, it had been said, were not a credit to the governing authorities. Whatever criticism might be made, they knew perfectly well that it was unjust and untrue. If they had criticisms to offer they should go farther afield. He expressed the hope of members of the Tyne and Blyth Federation that Mr. Stephen Easten would have health and strength to carry out the duties of his high office, as Lord Mayor of Newcastle.

Responding, Mr. Easten said that many of those who had criticised were men who had never made anything in their lives. He wished that some of them would come out and try to do the work themselves.

"The Building Industry" was proposed by the Sheriff of Newcastle. They could, he said, take credit to themselves that during the most difficult period through which they had passed they had been singularly immune from actual stoppages of work.

Mr. Forsdike replied, and said the builders of this country had never valued themselves as they should. The Sheriff had very truly pointed out that they had been singularly fortunate in not having any serious upheaval in the building industry, and for that they were very largely indebted to the ability and foresight of Mr. Stephen Easten. Whilst the housing question might be getting stale, houses were still wanted, and he was one of those who believed that if housing schemes had been left to those who understood housing the position would have been a much more favourable one at the present time.

NEW BUILDINGS IN LONDON.

Lancaster-gate. — RE-DECORATION. — Messrs. G. H. Carter, Ltd., of Holloway, N. 7, are carrying out structural alterations, complete installation of central heating, domestic water supply, re-decorations, &c., in the extension of the Palace Hotel at Lancaster-gate.

Granville-place, W.—All work in connection with the enlarging of the Norland Hotel, W. 1, is being executed by Messrs. G. H. Carter, Ltd., of Holloway, N. 7.

Old Broad-street.—BUILDING.—Mr. Aubrey M. Brown, surveyor and land agent, 62, Oxford-street, W., reports the disposal, on a long building lease, of the prominent site situate 40–41, Old Broad-street and 1 & 2, Union-court, E.C., the ground floor of which is now in the occupation of the Bank of Simla. Mr. Brown informs us that his clients intend erecting a large prominent building with stone front in 1924.

Wembley.—BUILDING.—Messrs. G. H. Carter, Ltd., of Holloway, N. 7, have secured the contract for building on the site at No. 17, Wembley Park-drive. Mr. W. A. Lewis, F.R.I.B.A., 11–12, Finsbury-square, is the architect.

Bickley, S.E.—Messrs. G. H. Carter, Ltd., of Holloway, N. 7, have had their tender accepted for the erection of a bungalow at Blenheim-road, Bickley. Messrs. Collis & Clark, of 526, Oxford-street, W. 1, are the architects.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the rates of wages in the building trade in England and Wales. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	C'p'ters. Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bath	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bedford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bishop Auckland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3	1/3	1/3	1/3	1/3	1/3	1/3	0/11½
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burton-on-Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cambridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chatham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Colchester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dudley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
E. Glam.(Mon. Vall.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Exeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Gloucester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grays	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Great Yarmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ipswich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lancaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leamington Spa	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
London	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Luton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Maidstone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Mansfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Northampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Norwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oakham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oxford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Plymouth	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Reading	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rochester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Rugby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Albans	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Helens	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Scarborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southend-on-Sea	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stroud	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3	0/11½
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swindon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Taunton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Torquay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsall	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Windsor	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
York	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

(For rates of wages in the Building Trade in Scotland, see page 867.)

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING AND PAINTING.

DECEMBER 1.—**Adisham.**—RE-SHINGLING.—For the re-shingling of Adisham Church tower. Mr. T. F. W. Grant, 11, Buckingham-street, Adelphi, W.C.2.

DECEMBER 1.—**Bingley.**—CLASSROOMS.—Erection of two classrooms at Eldwick Sanatorium, near Bingley, for the West Riding Public Health Committee. West Riding Architect, County Hall, Wakefield.

DECEMBER 1.—**East Ham.**—PAINTING.—For the internal re-decoration of Napier-road School, for the B.C. Borough Engineer, Town Hall, East Ham, E.6. Deposit 10s.

DECEMBER 1.—**Huddersfield.**—BUNGALOW.—Erection of a bungalow at Birchencliffe, Huddersfield, for Miss M. Mossop. Messrs. Stocks, Sykes & Hickson, architects, 4, St. Peter's-street, Huddersfield.

DECEMBER 2.—**Weston-super-Mare.**—EXTENSIONS.—For the extensions of the Council Offices, for the U.D.C. Mr. Harold A. Brown, Surveyor, Town Hall, Weston-super-Mare.

DECEMBER 3.—**Barnet, N.**—HOUSES.—Erection of 23 houses and contingent work on land adjoining May's-lane and May's-lane-road, for the Barnet U.D.C. Mr. W. B. Chancellor, Engineer and Surveyor, Council Offices, Barnet.

DECEMBER 3.—**Blackburn.**—EXTENSION.—For general builders' work in connection with the War Memorial extension at the Blackburn and East Lancashire Royal Infirmary. Messrs. Sames & Green, architects, 14, Richmond-terrace, Blackburn. Deposit £2 2s.

DECEMBER 3.—**Leominster.**—HOUSES.—Construction of 10 parlour-type and 10 non-parlour-type houses, for the T.C. Mr. James Budd, Borough Surveyor, Town Hall, Leominster.

DECEMBER 3.—**Newton Abbot.**—REPAIRS.—For repairs of the Wesleyan Church Tower, Newton Abbot. Mr. Dodge, 87, Queen-street, Newton Abbot.

DECEMBER 3.—**Plymouth.**—LODGE, &c.—Erection of porter's lodge, office, and waiting-room, at Greenbank House, for the B.G. Messrs. Thornely & Rooks, architects, 3, Sussex-terrace, Plymouth.

DECEMBER 3.—**Plymouth.**—FOUNDATIONS.—Construction of concrete walls and foundations in connection with the extension of a coal store at the Electricity Works, Prince Rock, for the T.C. Mr. J. Wibberley, Borough Engineer, Municipal Offices, Plymouth. Deposit £2 2s.

DECEMBER 3.—**Swindon.**—LAVATORY.—Construction of lavatory at Mechanics' Institute, for the G.W.R. Co. Mr. R. R. Ford, Secretary, Swindon.

DECEMBER 3.—**Wandsworth, S.W.18.**—DEMOLITION.—Demolition of premises, No. 380, Streatham High-road, S.W.16, for the Metropolitan Borough of Wandsworth. Borough Engineer, Mr. E. J. Elford, M.Inst.C.E., 215, Balham High-road, S.W.17.

DECEMBER 3.—**Wandsworth, S.W.18.**—FOUNDATIONS.—Excavations and construction of concrete foundations with steel reinforcement for proposed public swimming bath and buildings on the site of No. 380, Streatham High-road, S.W.16, for the Metropolitan Borough of Wandsworth. Borough Engineer, Mr. E. J. Elford, M.Inst.C.E., 215, Balham High-road, S.W.17.

DECEMBER 4.—**Bodmin.**—NEW POST OFFICE.—Erection of a new post office at Bodmin, for the Commissioners of H.M. Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

DECEMBER 4.—**Bray (Ireland).**—HOUSES.—Erection of three blocks of three houses each, for the U.D.C. Mr. P. H. McCarthy, 26, Lower Leeson-street, Dublin. Charge 15s.

DECEMBER 4.—**Burton-on-Trent.**—ALTERATIONS.—For alterations to offices, &c., at the Town Hall. Mr. George T. Lynam, Borough Engineer, Town Hall, Burton-upon-Trent.

DECEMBER 4.—**Golcar.**—HOUSES.—Erection of three dwelling-houses, Leymoor-road, Golcar. Messrs. Lunn & Kaye, architects, Milnsbridge.

DECEMBER 4.—**Hampton, Middlesex.**—ADDITIONS (BUILDING).—Additions to the Isolation Hospital at Uxbridge-road, Hampton-hill (new observation block and alterations and additions to Administration Block, &c.), for the Hampton Urban District Council. Mr. Sidney H. Chambers, Surveyor to the Council, Public Offices, Hampton, Middlesex. Deposit £2 2s.

DECEMBER 4.—**Monmouthshire.**—VARIOUS WORKS.—For carrying out the following, for the Monmouthshire Agricultural Committee:—(*a*) "Rock Cottage," Penhow, repairs and painting; (*b*) Penyworlod Farm, Penhow, repairs and painting; (*c*) road-making at Hill Farm, Llanvaches, and at Penyworlod Cottages, Penhow. Mr. A. Every Clayton, County Land Agent, 2, Gold Tops, Newport, Mon.

DECEMBER 4.—**Norwich.**—COTTAGES.—Erection of a block of six parlour cottages at the Corporation Sewage Farm, Whitlingham, for the T.C. Mr. Arthur E. Collins, City Engineer, Guildhall, Norwich.

DECEMBER 4.—**Wombwell.**—HOUSE.—Erection of a dwelling-house for the Manager at the New Scarborough Sewage Works, for the U.D.C. Mr. H. C. Huck, Clerk of Works, New Scarborough.

DECEMBER 5.—**Belfast.**—MUSEUM.—For superstructure works for first section of the Museum and Art Gallery in Botanic Gardens Park, for the T.C. Mr. R. B. Roe, Quantity Surveyor, 17, Wellington-place, Belfast. Deposit £2 2s.

DECEMBER 5.—**Brighton.**—HOUSES.—Erection of 87 houses on a portion of the Queen's Park Housing Site, for the County Borough of Brighton. Either member of the Panel of Architects: Messrs. Clayton & Black, 10, Prince Albert-street; Messrs. T. Garrett & Son, 34, Ship-street; Mr. E. Wallis Long, 56, East-street; Mr. W. H. Overton, 22, Ship-street. Deposit £1.

DECEMBER 5.—**Harbledown.**—HOUSE.—Erection of small house at Harbledown, near Canterbury. Mr. Edwin A. Jackson, M.S.A., architect, Ashford, Kent.

DECEMBER 5.—**Herts.**—SLATING.—Reslating the roof of water tower at Leavesden Mental Hospital, King's Langley, Herts, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1.

DECEMBER 5.—**Kent.**—TILING.—Repairing the tile roofs at White Oak, Swanley, Kent, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1.

DECEMBER 5.—**Swanley.**—ROOF REPAIRS.—For repairing the tile roofs at White Oak, Swanley, Kent, for the Metropolitan Asylums Board. Office of the Board, Victoria-embankment, E.C.4. Deposit £1.

DECEMBER 5.—**Various Places.**—WEIGHBRIDGE FOUNDATIONS.—Work to be done in forming weighbridge foundations at (1) Darenth Training Colony, Dartford, Kent; (2) Northern Fever Hospital, Winchmore-hill, N.21; (3) Queen Mary's Hospital for Children, Carshalton, Surrey, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1 in respect of each work.

DECEMBER 5.—**Woolwich, S.E.18.**—CONSTRUCTION.—Erection of a new kitchen annexe and baker's oven, at the Brook Hospital, Shooter's Hill-road, Woolwich, S.E.18, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4, after 10 a.m. Deposit £1.

DECEMBER 6.—**Colwyn Bay.**—HOUSES.—Erection of 34 houses at Church-road, Rhos, for the U.D.C. Mr. W. J. Dunning, Surveyor, Council Offices, Colwyn Bay.

DECEMBER 6.—**Doncaster.**—HOUSES.—For the erection of 19 houses at Oliver-road, Balby, for the T.C. Mr. F. Oscar Kirby, Borough Engineer, 2, Priory-place, Doncaster. Deposit £2 2s.

DECEMBER 7.—**Ewias Harold.**—SCHOOL.—For taking down and rebuilding Ewias Harold School (situate 1½ miles from Pontrilas Station), for the Herefordshire C.C. Mr. G. H. Jack, County Surveyor, High Town, Hereford. Deposit £1 1s.

DECEMBER 7.—**Shoeburyness.**—CONSTRUCTION.—(1) The construction of two timber-built refreshment rooms upon the Common at Shoeburyness; (2) the enlargement of the existing public conveniences upon the Common; (3) the construction of a public convenience and refreshment room on Whitaker's-parade, at Shoeburyness, for the U.D.C. Mr. E. Read, Surveyor, Council Offices, Shoeburyness.

DECEMBER 8.—**Urmston.**—LAYOUT.—Erection of a brick pavilion, public conveniences, and certain drainage works in connection therewith, and also for the lay-out of a bowling green and two grass and four hard tennis courts, at Golden Hill Estate, for the U.D.C. Surveyor, Council Offices, Urmston. Deposit £2 2s.

DECEMBER 9.—**Ossett.**—HOUSES.—Erection of 47 houses on the Horbury-road Site, for the T.C. Mr. H. Holmes, Borough Engineer, Town Hall, Ossett.

DECEMBER 9.—**Weston-super-Mare.**—CONVENIENCE.—Erection of a public convenience with appurtenant works, fo the U.D.C. Mr. Harold A. Brown, Surveyor, Town Hall, Weston-super-Mare.

DECEMBER 10.—**Bolton-upon-Dearne.**—DWELLING HOUSES.—Erection of 20 dwelling houses (4 parlour type, 16 non-parlour type) in Barnborough-lane, Goldthorpe, for the Bolton-upon-Dearne U.D.C. Mr. William Hy. Adams, M.S.A., Council Offices, Bolton-upon-Dearne. Deposit 10s. 6d.

DECEMBER 10.—**Howdon.**—TIMBER JETTY.—Construction of timber jetty in Howdon Yard Bay, for the Tyne Improvement Commissioners. Mr. Albert Blacklock. Secretary, Tyne Improvement Commission Offices, Bewick-street, Newcastle-on-Tyne. Deposit £2 2s.

DECEMBER 10.—**Morar.**—ARCHWAY.—For erection of archway, for the Committee of the North Morar War Memorial. Bank of Scotland, Mallaig.

DECEMBER 10.—**Newcastle-on-Tyne.**—FLATS.—Erection of 208 dwellings in flats in two stories at Delaval-road, Benwell, for the T.C. Housing Architect, 18, Cloth Market, Newcastle. Deposit £2 2s.

DECEMBER 10.—**Scotland.**—MAINTENANCE WORKS.—For the execution of Maintenance Works during the period of three years as follows:—Edinburgh, Glasgow, Stirling, Aberdeen, Dundee, Paisley, Greenock, Perth, Inverness, for H.M. Commissioners of Works. Contracts Branch, H.M. Office of Works, Storey's Gate, S.W.1. Deposits: 10s. for carpenters' and joiners' and ironmongers' work, and plumbers' work; 2s. 6d. for glaziers' work, and 5s. for other trades.

✱DECEMBER 11.—**Edmonton, N.18.**—BUILDING ADDITIONS.—Erection of certain additional buildings at the Laundry, Edmonton House, Bridport-road, Edmonton, for the Guardians of the Edmonton Union. Mr. J. C. S. Mummery, A.R.I.B.A., 34, Bloomsbury-square, W.C.1. No quantities will be provided.

DECEMBER 11.—**Glasgow.**—HOUSES.—Erection of 34 tenements at Dumbarton-road, Balmoral, and Earl-streets, for the T.C. Mr. J. Lindsay, Town Clerk, City Chambers, Glasgow.

DECEMBER 11.—**Gloucester.**—TELEPHONE REPEATER STATION.—Erection of a telephone repeater station at Gloucester, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

DECEMBER 12.—**Cardiff.**—FIREMEN'S QUARTERS.—Erection of firemen's quarters, &c., at the Central Fire Station, Westgate-street, for the T.C. Mr. T. Peirson Frank, F.S.I., City Architect, City Hall, Cardiff. Deposit £2 2s.

DECEMBER 12.—**Edinburgh.**—TELEPHONE EXCHANGE.—Erection of a telephone exchange at Newington, Edinburgh, for H.M. Commissioners of Works. Architect, H.M. Office of Works, 45, Drumsheugh-gardens, Edinburgh. Deposit £1 1s.

DECEMBER 12.—**Newton Abbot.**—LAVATORY.—For the erection of a gentlemen's lavatory in Market-street, for the U.D.C. Mr. C. D. White, Surveyor, Town Hall, Newton Abbot.

DECEMBER 12.—**Southend-on-Sea.**—HOUSES.—For the erection and completion of 66 houses for the Corporation. Mr. Robt. H. Dyer, Borough Engineer, Municipal Buildings, Southend-on-Sea. Deposit £2.

DECEMBER 12.—**Southend-on-Sea.**—CONCERT HALL, &c.—For the execution and completion of a concert hall and shelters on the Second Promenade, Pier Hill, for the Corporation. Mr. Robert H. Dyer, Borough Engineer, Municipal Buildings, Southend-on-Sea. Deposit £2.

DECEMBER 13.—**Penarth.**—HOUSES.—For erection for the U.D.C. of 22 houses at Coleridge-avenue and Comerswell-gardens' sites, Penarth. Council may accept tender for whole or part of the scheme. Surveyor, Council Offices, Penarth. Deposit £2 2s.

DECEMBER 13.—**Woolwich, S.E.**—HOUSES.—Erection of sixty houses, for the Metropolitan Borough Council of Woolwich, on their housing estate at Eltham. Council's Architect: Mr. John Sutcliffe, Borough Engineer, Town Hall, Woolwich. Deposit £3 3s.

✱DECEMBER 14.—**Morecambe.**—HOUSE.—Erection of a detached residence at Heysham-road, Morecambe. Mr. W. H. Porter, York House, Franklin Mount, Harrogate. Deposit 10s. 6d.

DECEMBER 14.—**Rowley Regis.**—HOUSES.—For erecting 12 semi-detached houses and incidental works of house drainage, &c., for the U.D.C. Mr. Daniel Wright, Clerk, Rowley Regis.

DECEMBER 15.—**Huddersfield.**—EXTENSIONS.—For extensions to West Riding Court House, at Huddersfield, for the West Riding Standing Joint Committee. Mr. Percy O. Platts, County Architect, County Hall, Wakefield. Deposit £1.

✱DECEMBER 17.—**Croydon, Surrey.**—HOUSES.—Erection of 48 houses (comprising 80 tenements) at Parchmore-road, Thornton Heath, in three sections, one of eight houses and two of 20 each, or as one tender for the whole, for the County Borough of Croydon. The Borough Engineer, Town Hall, Croydon. Deposit £2 for each section, or £6 for the whole of sections, which will be returned on receipt of a bona-fide tender.

DECEMBER 17.—**Poplar.**—TENEMENTS, &c.—Erection of 31 tenements with shops and showrooms on a site at Bow-road, for the B.C. Mr. Harley Heckford, Borough Surveyor, Council Offices, Poplar. Deposit £3 3s.

✱DECEMBER 18.—**Cheltenham.**—ADAPTATION.—Adaptation of the Wolseley Hotel, Cheltenham, to form a telephone exchange, for the Commissioners of His Majesty's Office of Works. Contracts, Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

DECEMBER 18.—**Hackney, E.8.**—BUILDING WORKS.—Building works, being extension and completion of the electricity sub-station at Dalston-lane, Hackney, for the Metropolitan Borough of Hackney. Borough Electrical Engineer, 306, Mare-street, Hackney, E.8, on and after November 26. Deposit £1 1s.

✱DECEMBER 19.—**Birmingham.**—BUILDING.—Erection of an employment exchange at Aston, Birmingham, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

DECEMBER 19.—**Featherstone.**—HOUSES.—Erection of 20 houses at Little-lane, Purston, near Pontefract, for the Featherstone U.D.C. Mr. Samuel Chesney, A.R.I.B.A., Council Offices, Featherstone, near Pontefract. Deposit £2 2s.

DECEMBER 19.—**Hawksworth.**—FARMHOUSE, &c.—(*a*) Farmhouse and buildings at Lane Side Farm, Hawksworth; (*b*) alterations and repairs to existing farm buildings at Lane Side Farm, Hawksworth, for the West Riding Small Holdings' Committee. Land Agent, County Hall, Wakefield. Deposit £1.

DECEMBER 19.—**West Riding.**—REPAIRS.—Adaptations and repairs to existing Farm-house and buildings on Loversall Estate and Carr Lodge Farm, for the West Riding Small Holdings Committee. County Land Agent, County Hall, Wakefield.

✱DECEMBER 20.—**Leigh, Lancs.**—TELEPHONE EXCHANGE.—Erection of a telephone exchange at Leigh, Lancs, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street London, S.W.1. Deposit £1 1s. (payable to the Secretary).

✱DECEMBER 20.—**Portsmouth.**—FLATS.—For works to be executed and materials to be provided for the erection and completion of four blocks of flats in Vollier-street, Landport, and for maintenance thereof in thorough repair for six calendar months from the completion thereof, for the Portsmouth T.C. Mr. Arthur W. Ward, Borough Engineer, Town Hall, Portsmouth.

DECEMBER 21.—**Kent.**—SCHOOL EXTENSION.—Extension of the School of Art, Beckenham, for the U.D.C. County Education Architect (Mr. W. H. Robinson, F.S.Arc.), Room 69, Sessions House, Maidstone. Deposit £2.

✱DECEMBER 28.—**Southampton.**—HOTEL, &c.—Contract No. 1: the erection of a hostel for 345 students (deposit £5 5s.); (2) For the construction of ferro-concrete floors, stairs and flat roofs to the Hostel, "Coignet" system, (deposit £2 2s.), for the County Borough of Southampton. Mr. A. L. Roberts, County Architect, The Castle, Winchester. Cheques to be made payable and crossed "Lloyd's Bank, Ltd. (Capital and Counties Branch), Winchester."

JANUARY 9.—**Tynemouth.**—SCHOOL.—The Education Committee are inviting tenders for the erection of a new elementary open-air school in Lovaine-gardens, North Shields, to accommodate 170 children; and also, by the same date, tenders for a new elementary school at Spring-gardens, North Shields, providing accommodation for 845 children.

NO DATE.—**Barrhead.**—PAINTER'S WORK, &C.—For the glazier and painter work in connection with the buildings forming the Kerr-street housing scheme. Town Clerk, Barrhead.

✱NO DATE.—**Golders Green.**—HOUSES.—Erection of six parlour-type houses. Mr. Matthew J. Dawson, 9, New-square, W.C.2.

NO DATE.—**Ramsgate.**—EXTENSION.—For the erection of new ward, &c., at Hospital, for the Ramsgate War Memorial Committee. Mr. S. W. Smith, Secretary, 57, Queen's-street, Ramsgate. Deposit £2 2s.

FURNITURE, MATERIALS, etc.

DECEMBER 1.—**Dolgelly.**—ROAD PLANT.—Supply to the Merioneth C.C. of steam roller with scarifier, haulage engine with trailer, stone crusher and screen, two tarring machines, and water-cart.—Mr. Wm. Owen Jones, County Surveyor Dolgelly.

DECEMBER 1.—**Hythe.**—PIPES.—Supply of 200 yds. of 8 in., 1,640 yds. of 4 in., and 140 yds. of 3 in. cast-iron pipes and special castings. Mr. W. F. Bickford, Borough Surveyor, Hythe.

DECEMBER 3.—**Nottingham.**—MATERIALS.—Supply of engineers' and plumbers' materials to the Board of Guardians, for one year. Mr. J. A. Battersby, Clerk, Offices, Shakespeare-street, Nottingham.

DECEMBER 4.—**Audley.**—MATERIALS.—Supply of kerbs and paving bricks, to the U.D.C. Mr. A. Cotton, Surveyor, Council Offices, Audley.

DECEMBER 5.—**Cowbridge.**—SUPPLIES.—For supply to the Bridgend and Cowbridge Guardians for use at Cottage Homes and Workhouse of hardware, drapery, boots, &c., haulage, and also for use of recipients of out-relief at Ogmore, Bridgend, Cowbridge and Maesteg relief districts, supply of boots. Mr. R. Hamor Cox, Clerk to the Guardians, Union Offices, Bridgend.

DECEMBER 5.—**London.**—PLATES.—Supply of enamelled iron badges, plates, &c., for the use of the Metropolitan Police, for one year. Receiver's Registry, New Scotland-yard, S.W.1.

DECEMBER 5.—**Neath.**—SUPPLIES.—For supply to the Neath Farm School of the Glamorgan County Council of six months' supply of clogs, boots and drapery, &c. Mr. C. Leslie Thomas, Solicitor, 42, Queen-street, Neath, Secretary of the Management Committee.

DECEMBER 8.—**Crickhowell.**—SUPPLIES.—For supply to Board of Guardians of boots, petroleum, cordwood, &c. Mr. Thomas Vaughan, Town Hall, Crickhowell.

DECEMBER 8.—**Maidstone.**—MATERIALS.—Supply of road materials to the Kent C.C. Mr. H. T. Chapman, County Surveyor, St. Peter-street, Maidstone.

DECEMBER 13.—**Wallasey.**—OILS.—Supply of engine lubrication oil, cylinder oil, and Colza lamp oil, for a period of six or nine months to the T.C. Ferries General Manager, Ferries Office, Seacombe.

JANUARY 23, 1924.—**Madras.**—PIPES.—Supply of stoneware pipes and specials, ranging from 4 in. to 18 in. diameter, and aggregating a total length of 400,000 lineal ft., for the T.C. Messrs. James Mansergh & Sons, agents, 5, Victoria-street, S.W. Charge 5s.

NO DATE.—**Porth (Rhondda).**—DRUGS.—For supply to Porth and District Hospital of six months' supply of drugs and dressings. Secretary, Hospital, Porth.

ENGINEERING, IRON AND STEEL.

DECEMBER 1.—**Guernsey.**—CONCRETE DECK.—For the removal of the timber deck at No. 2 Landing, White Rock Pier, and the construction of a new deck in reinforced concrete on the Considere system at the Harbour of St. Peter Port, Guernsey. Mr. J. H. Duquemin, States Engineer, Guernsey.

DECEMBER 1.—**London, W.10.**—ELECTRICAL WORK.—Electrical work required to be done at the St. Marylebone Hospital, Rackham-street, Notting Hill, W. 10, in connection with the X-ray Department and Lecture Room for Nurses, for the St. Marylebone Board of Guardians. Messrs. Jarvis & Richard, architects, 60, Tufton-street, S.W.1, between the hours of 10 a.m. and 5 p.m. on November 13, 14 & 15. Deposit £1 Treasury Note.

DECEMBER 3.—**Birmingham.**—REFUSE DISPOSAL PLANT.—For the supply and erection of plant for refuse disposal and salvage works, at Redfern-road, Hay Mills, for the T.C. Mr. James Jackson, Superintendent, Salvage Department, 161, Corporation-street, Birmingham. Deposit £1 1s.

DECEMBER 3.—**Bradford.**—ADVERTISING STATION.—Supply and erection of a steel framework advertising station in Bank-street, for the T.C. City Engineer, Town Hall, Bradford.

DECEMBER 3.—**London.**—CONVEYOR.—Supply of 10-ton hand-operated overhead traveller, of 34 ft. 6 in. span, for the Isle of Dogs Pumping Station, for the L.C.C. Chief Engineer, Old Country Hall, Spring-gardens, S.W.1. Deposit £2.

DECEMBER 3.—**Norwich.**—FENCING.—Supply and erection of wrought-iron fencing gates, &c., at Wensum Park, for the T.C. Mr. A. E. Collins, City Engineer, Guildhall, Norwich.

DECEMBER 3.—**Sydney.**—SWITCHGEAR.—High tension switchgear, for Municipal Council. Department of Overseas Trade (Room 52), 35, Old Queen-street, S.W.1.

DECEMBER 3.—**Wandsworth.**—FOUNDATIONS.—Excavation and construction of concrete foundations with steel reinforcement for proposed public swimming-bath and buildings, Streatham High-road, for the B.C. Mr. E. J. Elford, Borough Engineer, 215, Balham High-road, S.W.17.

DECEMBER 4.—**Edinburgh.**—STEEL MAINS.—Supply of 1,200 yds. of 3 in., 700 yds. of 4 in., 2,400 yds. of 6 in., and 1,300 yds. of 9 in. spigot and socket solid drawn weldless steel mains. Gas Engineer, 15, Calton-hill, Edinburgh.

DECEMBER 4.—**Stoke-on-Trent.**—HEATING.—For extension of heating and hot-water service at Institution, for the B.G. Mr. T. Wood, Clerk, Union Offices, Stoke-on-Trent.

DECEMBER 4.—**Willesden.**—LAUNDRY MACHINERY.—For supply and fixing of laundry machinery at Municipal Hospital, for the U.D.C. Medical Officer of Health, Town Hall, Willesden.

DECEMBER 5.—**London.**—ELECTRIC INSTALLATION.—Extensions to the installation of electric lighting and power in the new kitchen at Tooting Bec Mental Hospital, Tooting, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

✱DECEMBER 5.—**London, S.W.17.**—GUTTERING.—Supplying and delivering cast-iron rain-water gutter and down pipes at Tooting Bec Mental Hospital Extension, Church-lane, S.W.17, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

DECEMBER 6.—**St. Pancras.**—PUMP.—Supply of vertical electric motor-driven condensing water pump to deal with 750,000 gallons per hour, for the B.C. Electricity Dept., St. Pancras. Deposit £1.

DECEMBER 7.—**Brighton.**—LANDING STAGE.—Extension of landing stage of the Brighton Marine Palace & Pier Company. Mr. M. Noel Ridley, Standard House, 133, Cardigan-road, Leeds.

DECEMBER 7.—**East Lothian.**—PIPES.—Supply to the East Lothian Western District Water Board of 3,600 tons of cast-iron pipes. Messrs. G. H. Hill & Sons (Manchester), 40, Kennedy-street, Manchester. Deposit £1 1s.

DECEMBER 7.—**Hitchin.**—PUMPING PLANT.—For supply and erection of steam-driven centrifugal pumping plant at Waterworks, for the U.D.C. Mr. W. C. Tines, Clerk, Town Hall, Hitchin.

DECEMBER 7.—**London.**—STEELWORK, &C.—(1) Steelwork for bridges, (2) cast-iron pipes and valves, for South Indian Railway Co. Offices, 91, Petty France, Westminster, S.W.1. Charge 5s. each.

DECEMBER 8.—**Grangemouth.**—WATER MAIN.—For laying about 3½ miles of 12 in. diameter cast-iron pipes, or alternatively about 6 miles of 12 in. diameter cast-iron pipes, for the T.C. Mr. David A. Donald, C.E., Town Hall, Grangemouth. Deposit £2 2s.

DECEMBER 8.—**Radcliffe.**—CONDUIT.—Supply and erection of a steel and cast-iron sewage conduit over the L.M. & S. Railway, for the U.D.C. Mr. W. L. Rothwell, Engineer, Council Offices, Radcliffe. Deposit £1 1s.

DECEMBER 8.—**Ripley.**—PIPES.—Supply of 6 in. C.I. pipes and specials and laying water main, for the U.D.C. Mr. G. W. Bird, Surveyor, Town Hall, Ripley.

DECEMBER 10.—**Carlisle.**—BRIDGE.—Construction of a steel lattice girder footbridge, 252 ft. long and 6 ft. wide, over the River Caldew, for the T.C. Mr. Henry C. Marks, City Engineer, 18, Fisher-street, Carlisle.

DECEMBER 11.—**London.**—MATERIALS.—Supply to the Director-General, India Store Department, of copper and brass bolt, rod, tubing, plates and sheets, and Babbit's metal. Branch 12, Belvedere-road, S.E.

DECEMBER 11.—**Temple Cloud, near Bristol.**—HEATING (HOT-WATER).—Installing, for the Clutton B.G. in their Institution, a system of hot-water heating and hot-water service, together with sundry other improvements. The Engineer, Clutton Union, Temple Cloud, near Bristol.

DECEMBER 12.—**Bramley.**—ELECTRIC LIGHTING.—For installing electric light at the Institution of the Board of Guardians. Clerk, 1, Green Hill-road, Armley, Leeds.

DECEMBER 20.—**South Africa.**—MATERIALS, &C.—Supply to the municipality of Graaf-Reinet of (*a*) cast-iron water-pipes, valves and fittings; (*b*) crude oil engines, generators and street equipment. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

DECEMBER 31.—**Kempton Park.**—ENGINES, &C.—Supply and erection of two reciprocating engines and pumps at Kempton Park Pumping Station, for the Metropolitan Water Board. Chief Engineer's Department, 173, Rosebery-avenue, Clerkenwell, E.C. Deposit £3 3s.

DECEMBER 31.—**London.**—CRANES.—Supply of (*a*) 3-ton travelling crane, and (*b*) 30 cwt. workshop crane, for the Central Car Depot of the L.C.C. Tramway Manager, Victoria Embankment, W.C. Deposit £2.

JANUARY 16, 1924.—**Glasgow.**—REFUSE DISPOSAL WORKS.—Tenders and designs for proposed refuse disposal works, at Govan, Glasgow. Mr. W. Greig, Superintendent of Cleansing, 20, Trongate, Glasgow.

JANUARY 17.—**New Zealand.**—PIPES, &C.—Supply of 10 in., 12 in., and 21 in. steel pipes and fittings, for the Orongorongo-Karori Water Main. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

FEBRUARY 5.—**New Zealand.**—GIRDER SPANS.—Supply of plate girder spans to the Public Works Tender Board, New Zealand, for the Stratford Main Trunk Railway. Department of Overseas Trade, 35, Old Queen-street, S.W. Reference 12569/ED/EC.

FEBRUARY 14.—**Argentine.**—POWER STATION.—For the construction of a central electric power station of 15,000 h.p., for the Argentine State Oilfields Administration. Department of Overseas Trade, 35, Old Queen-street, S.W.

MAY 1.—**China.**—BRIDGE.—The Commercial Councillor at Peking has forwarded to the Department of Overseas Trade copies of the official text of a call for tenders by the Hai Ho Conservancy Commission, for the erection of a bridge over the Hai Ho at Tientsin. Tenders must be in the hands of the Commission before noon on May 1, 1924. The cost of erecting the new bridge has been roughly estimated at Tls. 700,000, say £105,000. Department of Overseas Trade, 35, Old Queen-street, S.W.1. Reference 11647/F.E./E.C./2.

ROAD, SANITARY, AND WATER WORKS.

DECEMBER 1.—**Belfast.**—TRAMWAY TRACK.—Construction of about 3,200 lin. yds. of single track, for the T.C. Mr. S. Carlisle, General Manager, Corporation Tramways, Sandy-row, Belfast. Deposit £5 5s.

DECEMBER 3.—**Aberavon.**—CONCRETE CULVERT.—For carrying out for the Joint Committee of the Glamorgan County Agricultural Committee and the landowners on Aberavon Moors the construction, excavation, laying and jointing of a 2 ft. 6 in. concrete culvert with manholes and valve chambers. Borough Engineer, Municipal Buildings, Aberavon.

DECEMBER 3.—**Barnsley.**—ROADS.—For making up of Salisbury-street, Kensington-road, Canning-street (Worsbro' Common), Dillington-square, and Dumfries-row, for the T.C. Borough Engineer, Fairfield House Offices, Barnsley.

DECEMBER 3.—**London.**—TAR PAVING WORKS, &C.—For carrying out tar paving works, &c., to the Council's elementary and other schools and other premises or sites provided or maintained by the Council for a period of twelve calendar months commencing on January 1, 1924, and thereafter until determined by three calendar months' notice given by either party, for the L.C.C. Architect to the Council, The County Hall (Room 3), Westminster Bridge, S.E. 1.

DECEMBER 3.—**Newcastle-under-Lyne.**—ROAD.—Construction of new road, for the T.C. Mr. A. A. Pattison, Borough Engineer, Newcastle-under-Lyne. Deposit £5 5s.

DECEMBER 3.—**Port Talbot.**—CULVERT.—Laying of a 2 ft. 6 in. concrete culvert, &c., for Glamorgan County Agricultural Committee. Borough Engineer, Municipal Buildings, Aberavon.

DECEMBER 3.—**Romford.**—WATER SUPPLY.—For construction of concrete tank and other works in connection with the water supply to Havering, for the R.D.C. Mr. W. J. Grant, Surveyor, South-street, Romford.

DECEMBER 3.—**Steyning.**—SEWERS.—Construction of about 1,750 yards of stoneware pipes for stormwater sewers, for the R.D.C. Mr. Geo. W. Warr, Engineer, Town Hall, Southwick. Deposit £2 2s.

DECEMBER 3.—**Stockton-on-Tees.**—SANITARY.—Conversion of 400 privy middens and pan closets into water closets, for the T.C. Borough Engineer, Victoria Buildings, Stockton-on-Tees.

DECEMBER 3.—**Tynemouth.**—ROADS.—(1) Laying random sett paving in the back streets between King Edward-road and Albury Park-road, and (2) laying cement concrete footpaths in Brislee-avenue and King Edward-road, for the T.C. Mr. John F. Smillie, Borough Surveyor, Tynemouth.

DECEMBER 4.—**Hereford.**—WATER SUPPLY.—For construction of small storage reservoir and other works in connection with the water supply, Little Birch, for the R.D.C. Mr. J. Parker, 141, St. Owen-street, Hereford. Deposit £2 2s.

DECEMBER 4.—**Normanton.**—ROADS.—For making-up Dalefield-avenue, for the U.D.C. Mr. W. F. Copp, Surveyor, Council Offices, Normanton.

DECEMBER 5.—**Birmingham.**—ROADS.—Construction of (1) Alcester-street: Reinforced concrete foundation to carriageway and supplying granite kerb; (2) Anderton-road: Granite sett paved carriageway on reinforced concrete foundation; (3) Wake Green-road: Reconstruction of carriageway in tarred macadam on slag foundation, for the T.C. Mr. H. H. Humphries, City Engineer, Council House, Birmingham. Deposit £2 each.

DECEMBER 5.—**Cheadle.**—SEWAGE DISPOSAL.—Laying about 1,030 yards of 6 in. pipes, &c., and construction of sewage tanks, for the R.D.C. Mr. W. H. Makepeace, Westfield, Stockton Brook, Stoke-on-Trent. Deposit £1 1s.

✱DECEMBER 5.—**Chiswick, W.4.**—CONCRETE ROADS.—Making up of a portion of Hartington-road, Chiswick, by the construction of a reinforced concrete carriageway and other works incidental thereto.

DECEMBER 5.—**Chiswick.**—WOOD PAVING.—For about 10,800 yards super. of wood paving on concrete foundation in Sutton Court-road, for the U.D.C. Mr. E. Willis, Surveyor, Town Hall, Chiswick.

DECEMBER 5.—**Ebbw Vale.**—ROADWAY, &C.—For construction of 570 yds. super. of roadway, with all necessary kerbing, footpaths, and storm water drains, at the Gautre Site, Ebbw Vale, for the U.D.C. Mr. P. T. Davies, Surveyor, Council Offices, Ebbw Vale. Deposit £1 1s.

✱DECEMBER 5.—**Glamorganshire.**—VARIOUS ROAD WORKS.—For carrying out for the Glamorgan County Council the following road works: (*a*) Cardiff and Swansea Main Road (widening between Keeper's Lodge and Star Cottages and between Curt-y-defaid and Pont-yr-offeiriad); (*b*) Bridgend and Bryncethin Main Road (widening between Coity Cross Roads and Cefn Hirgoed Common); (*c*) Cardiff and Pontypridd Main Road (widening near Walnut Tree Bridge Inn, Taffs Well); (*d*) Neath and Pontadawe Main Road (improvement at junction with Neath and Glynneath road); (*e*) Swansea and Loughor Main Road (widening at Lower Loughor. Wage and hour conditions in contract and insurance of workmen. For work No. (*a*) Port Talbot Police Station; (*b*) Bridgend Police Station; (*c*) Taffs Well Police Station; (*d*) Neath (County) Police Station; (*e*) Loughor Police Station; or, for all works, County Surveyor, County Hall, Cardiff.

DECEMBER 5.—**Hull.**—TRAMWAYS.—For the renewal of tramway tracks on Spring Bank and Prince's-avenue, a total length of about 1¼ miles double track, for the T.C. Mr. F. W. Bricknell, City Engineer, Guildhall, Hull.

DECEMBER 5.—**London, S.W.17.**—ASPHALTE PAVING.—Asphalte paving to certain covered ways at Tooting Bec Mental Hospital extension, Church-lane, Tooting, S.W.17, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4, on and after 10 a.m., Wednesday, November 21, 1923. Deposit £1.

DECEMBER 5.—**Manchester.**—ROADS.—Making-up part of Platt-lane and Demesne-road, for the T.C. Paving, &c., Department (District Surveyors' Office), Manchester. Deposit £1 1s.

DECEMBER 6.—**Aberdeen.**—SEWER.—Construction of sewer on North Esplanade, for the T.C. Mr. J. Gordon, Borough Surveyor, Town Hall, Aberdeen. Deposit £3 3s.

DECEMBER 6.—**Southend-on-Sea.**—ROADS.—For taking-up of Western-road, Fairmead-avenue, Fairfax-drive, and the sewering of Blenheim-crescent. Mr. Robert H. Dyer, Surveyor, Municipal Buildings, Southend-on-Sea. Deposit £2.

DECEMBER 8.—**Farnborough.**—ROADS.—For making up Fellows-road, South Farnborough, for the U.D.C. Mr. A. H. Dungay, surveyor, Alpha Chambers, South Farnborough. Deposit 10s. 6d.

DECEMBER 8.—**Kidderminster.**—PAVING.—Laying reinforced concrete foundation and paving with granite setts in Station Hill, for the T.C. Mr. J. Hawcroft, Borough Engineer, Town Hall, Kidderminster. Deposit £2 2s.

DECEMBER 8.—**Ripley.**—SEWAGE WORKS.—Reconstruction of Waingroves sewage outfall works, for the U.D.C. Mr. G. W. Bird, Surveyor, Town Hall, Ripley.

DECEMBER 9.—**Weston-super-Mare.**—ROADS.—For works of sewerage, surface water drains, &c., for the U.D.C. Mr. H. A. Brown, Surveyor, Town Hall, Weston-super-Mare. Deposit £5.

DECEMBER 10.—**Manchester.**—ROADS.—For making-up Clarence-street, Newton Heath; New-street, Newton Heath; and Coffee-street, Gorton, for the T.C. Paving, &c., Department (District Surveyors' Office), Town Hall, Manchester. Deposit £1 1s.

DECEMBER 10.—**Repton.**—SEWERS.—Construction of stoneware pipe sewers, &c., at Mickleover, for the R.D.C. Messrs. Willcox & Raikes, 63, Temple-row, Birmingham. Deposit £5 5s.

★DECEMBER 11.—**Edmonton, N.18.**—ROAD ALTERATIONS.—Alteration and re-forming at a different gradient the entrance road at the Silver-street entrance of the North Middlesex Hospital, Edmonton N.18, for the Guardians of the Edmonton Union. Mr. J. C. S. Mummery, A.R.I.B.A., 34, Bloomsbury-square, W.C.1. No quantities will be provided.

DECEMBER 11.—**Gosforth.**—SEWERS.—Laying new sewers and formation of roadway on housing site, for the U.D.C. Mr. Geo. Nelson, Surveyor, Council Chambers, High-street, Gosforth.

DECEMBER 11.—**Leeds.**—ROADS.—Making-up of Allerton-avenue, Allerton-grove, back Barkly-grove, and the kerbing and paving of channels at Weetwood-lane Improvement, for the T.C. Highways and Permanent Way Dept., 1, Swinegate, Leeds. Deposit £1 1s.

DECEMBER 11.—**London.**—SEWER.—Construction of a 4 ft. internal diameter sewer in brick of a total length of about 7,200 feet, in Wandsworth and Lambeth, for the L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1. Deposit £5.

DECEMBER 11.—**London.**—SEWER.—Construction of a brick sewer of varying sizes from 5 ft. to 9 ft. internal diameter, of a total length of about three miles, in Lewisham, for the L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1. Deposit £10.

DECEMBER 13.—**Rawtenstall.**—SEWERS.—For the sewering of Hollin-lane, for the T.C. Borough Surveyor's Office, Town Hall, Rawtenstall. Deposit £1.

DECEMBER 26.—**Mull.**—ROADS.—Construction of 2¼ miles of road in the Island of Coll, for the Argyll C.C. Mr. Arthur MacNaughton, Mull District Surveyor, Tobermory.

★NO DATE.—**Banbury.**—DRAINAGE, ROADS, PAVING BUILDINGS, &c.—Various works, including surface levelling, drainage, tarmac yards and roads, concrete paving, buildings, &c., in the construction of the proposed new cattle market, adjoining the L.M.S. Rly. at Banbury. Mr. F. J. Cooke, M.S.A., architect, Prudential Chambers, Banbury. Deposit £3 3s.

Competitions.

(*See Competition News, page* 838).

Auction Sales, Tenders, etc.

DECEMBER 4 AND 5.—**London, E.9.**—Mr. F. H. Clark will sell, at the National Projectile Factory Hackney Marshes, E.9, all the materials contained therein, including a quantity of building materials, portable buildings, glass, &c. Auctioneer, Railway Wharf, York-road, Wandsworth, S.W.18.

★DECEMBER 11.—**Guildford.**—Messrs. Joseph Hibbard & Sons will sell (by order of Messrs. Sutton & Co. (Guildford), Ltd., who are relinquishing business), in three lots (unless previously sold by private treaty), at the offices in Woodbridge-road, Guildford, very valuable main road modern freehold timber yard, store, and suite of offices, situated at 86A, Woodbridge-road, Guildford; also valuable freehold mill site, at Merrow. Auctioneers, as above.

★DECEMBER 11.—**London, S.W.**—Messrs. Veryard & Yates will sell without reserve at 255, Clapham-road, S.W. (close to the "Swan," Stockwell), a stock of timber, fittings, and building materials from demolition of a commodious residence. Auctioneers, 365, Norwood-road, S.E.27.

DECEMBER 13.—**London, E.C.**—Mr. Joseph Stower will sell, with vacant possession, freehold property containing the important area of about 75,000 ft., or nearly 1¾ acres, prominently and conveniently situated on the north side of and fronting the main Bow-road. Auctioneers, 43, Chancery-lane, London, W.C.2.

★DECEMBER 13.—**London, S.E.**—Messrs. Veryard & Yates will sell without reserve, at 126, Norwood-road, S.E. (close to Tulse-hill and Herne-hill Stations), useful building materials, timber, &c., iron girders, York stone, paving, firewood, &c. Auctioneers, 375, Norwood-road, S.E.27.

Public Appointments.

DECEMBER 4.—**Cardiff District.**—The Cardiff R.D.C. is to appoint a Town-Planning Assistant at salary of £250 per annum. Must be draughtsman and experienced in surveying and levelling. Full particulars and copies of testimonials to Mr. M. Warren, M.B.E., Clerk to the R.D.C., Park-place, Cardiff. by December 4th.

DECEMBER 6.—**Greenwich, S.E.10.**—The Council of the Metropolitan Borough of Greenwich is prepared to receive applications for the following appointments:—(1) Grade B Clerk in the Works Department; (2) Grade A Clerk (between the ages of 17 and 21), in the Town Clerk's Department. Mr. Frederick J. Simpson, Town Clerk, Town Hall, Greenwich-road, S.E.10, endorsed "Grade B Clerk," or "Grade A Clerk," as the case may be.

NO DATE.—**Glamorgan.**—The Glamorgan C.C. is to appoint a Quantity Surveyor at a commencing salary of £289 15s. per annum. The Council will also appoint an Architectural Assistant in the office of the County Schools Architects' Office (Eastern Division) at commencing salary £171 per annum. Applications, with particulars of age, experience, qualifications, &c., to Mr. D. Pugh Jones, Architect, County Hall, Cardiff.

PATENTS.*

APPLICATIONS PUBLISHED.

202,921.—H. Abraham: Roofs.

202,926.—E. Unmack: Double window-panes.

203,004.—C. J. Evans and A. J. Allen: Theatre seats.

203,012.—A. C. Brock: Chairs, settees, and like articles of furniture.

203,030.—C. W. Cope: Device for determining the position of pictures and the like on walls.

203,033.—W. S. Graff-Baker: Escalators.

203,041.—C. H. Twigg and C. Cutt: Frame for mirrors and pictures.

203,042.—A. P. Laurie: Preservation of stone.

203,055.—H. T. Tudsbery: Apparatus for testing the physical qualities of materials.

203,068.—R. G. Kirton: Mould-board apparatus for concrete structures.

203,106.—R. H. Ellis and F. Simper: Packing-case.

203,112.—A. S. Douglass: Building-blocks.

203,132.—British Everite & Asbestilite Works, Ltd., and E. F. Jucker: Roofing tiles or sheets.

203,150.—North of England School Furnishing Co., Ltd., and J. H. Pease: Sliding and folding partitions and windows.

203,195.—L. Steingasser: Method and apparatus for grinding and polishing wood or similar materials.

* All these applications are now in the stage in which opposition to the grant of Patents upon them may be made.

203,206.—W. Wright: Chairs, settees, and similar furniture.

203,208.—G. J. Hone and J. Westwood & Co., Ltd.: Grabs.

203,226: W. Schonfield: Hand-operated mechanism or gear for opening and closing skylights, hinged windows.

203,234.—J. Cartland & Son, Ltd., and C. Y. Hopkins: Hinges.

Applications published

203,235.—G. W. Pick: Folding chairs.

203,245.—R. Thomson and E. Pollard & Co., Ltd.: Locking-device for sliding-doors of show-cases.

203,277.—R. A. Janes: Music stools.

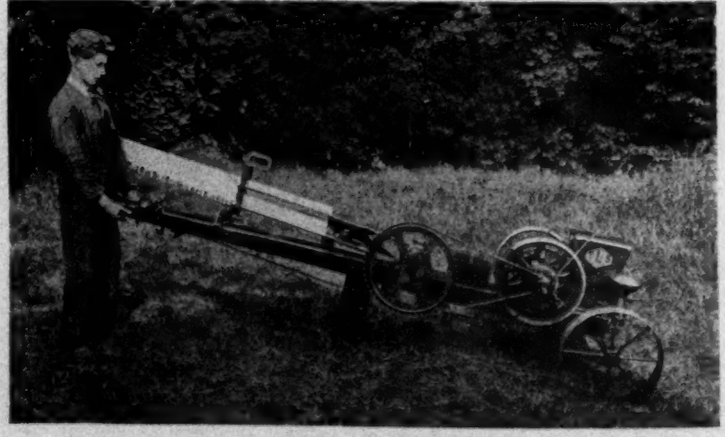
203,390.—International One-Pipe Heater, Ltd. (International Heater Co.): Heating of houses, factories, halls, and other buildings.

203,414.—W. Savage and Ruston & Hornsby, Ltd.: Excavating-machines.

NEW INVENTION.

THE "Teles" drag saw, illustrated herewith, should be of considerable interest to those estate owners and those whose business includes the cutting-up of trees. It is entirely of British manufacture, and it is claimed that with its aid as much work can be done in a week as four men could do in a month without it. Tests have shown that it will cut through a 45-in. log in nine minutes, as against 45 minutes required to perform the same work by two men with a hand cross-cut saw. The saw is furnished complete with engine and 5-ft. blade, or a longer blade can be supplied if required.

The engine is a hopper-cooled 4-cycle single cylinder 1½ h.p. petrol engine, running at 600 revolutions per minute. It is fitted with a high-tension magneto, and the speed is regulated by means of a very sensitive governor acting on the throttle. The engine can be used for other work when not required for cross-cutting. A multiple disc clutch, the same as used on motor cars, is furnished, and permits the engine to run while the saw is idle, thus saving time in stopping and starting the engine. Among the special features of the machine are: the guide handle, which holds the saw rigid while being moved, prevents accidents; the long continuous truss rod, extending from front to rear end, prevents vibration and ensures increased strength; the anchor hook is of special design, and grips the log and fastens the machine securely for sawing. An outstanding feature is that the saw works on the opposite side from the engine clutch, which makes it possible to operate the machine from the side opposite the saw, ensuring the operator against the danger of accidents. The machine is furnished complete ready to saw wood. The clutch is detachable, and can be replaced by a pulley on the shaft. The gross weight (packed) is 5 cwt.



New Drag Saw.

PROPOSED NEW BUILDINGS & OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ATHERSTONE.—The U.D.C. has decided to adopt a scheme for the clearance of part of the slum area in Atherstone, and for the erection of a large number of houses for the ejected tenants.

AYR.—Plans passed by Dean of Guild Court: 4 houses in Quail-road, at an estimated cost of £3,000, Messrs. Hart & Cumming, joiners, Main-street; house in Ashbrove-street, T. Williams, 8, Bath-place; house in Belmont-avenue.

BANGOR.—The Surveyor has been requested by the U.D.C. to elaborate a scheme for slipper and needle baths and a heated swimming bath at Pickie.

BILSTON.—An inquiry has been held by the Ministry of Health into the application of the U.D.C. to borrow £9,700 for improvements at the Lunt sewage disposal works.

BIRMINGHAM.—Heathfield Hall, Handsworth, the home of James Watt, the famous engineer, and later the residence of the late Mr. George Tangye, has been sold by the Gibson Watt trustees to a local syndicate, and it is proposed to develop the estate for the erection of private houses.

BLACKBURN.—The Pastor (the Rev. H. Townley) and the Deacons of the Congregational Church at Read have acquired the building of the Liberal Club, which it is proposed to convert into an institute for men and women.

BRADFORD.—The Housing Sub-Committee of the Health Committee have approved of plans for the erection of between 30 and 40 detached houses, all of which are to rank for subsidy.

BROMLEY.—Plans passed by R.D.C.: Mr. G. B. Farra, house, Croydon-road, Keston Park Estate; Mr. H. D. Vigor, house, Forest-drive, Keston Park Estate; Mr. J. H. Pedlar, two detached bungalows, Longdon Wood-avenue, Keston Park Estate; Mr. B. Di-Corpo, two detached bungalows at Cudham; Miss M. E. Wright, building at Kent Acre, Sutherland-avenue, Cudham; Mr. G. A. Christensen, bungalow, Aperfield-road, Cudham; Mr. G. Coe, house, Chalk Farm Estate, Chislehurst-road; Messrs. Homsteads, Ltd., four bungalows and two houses, Oxenden Wood-road, Chelsfield; Mr. E. J. Tagg, house, Beaumont-road, Orpington; Mr. H. Jelley, house, Irene-road, Orpington.—The Ministry of Health has agreed to the erection of 50 houses by the Council.

BUDLEIGH SALTERTON.—The U.D.C. is to arrange with Mr. Radcliffe for the building of 6 cottages, for which a subsidy will be given.

BURY.—Plans are being prepared by Mr. A. Brocklehurst, architect and surveyor, for the structural alterations to the "Roe Buck" Hotel, Bury, and the "Jolly Waggoners," Buckley Wells, for the proprietors, Messrs. The Crown Brewery Co., Ltd., Bury.

CHELMSFORD.—The chancel of Chelmsford Cathedral is to be extended eastwards, thereby providing accommodation for canons' stalls, as a memorial of the diocese to Dr. Watts Ditchfield, the late Bishop of Chelmsford. Sir Charles Nicholson is the architect for the extension, which will cost between £5,000 and £6,000.

CONISBOROUGH.—The U.D.C. has made application to the Ministry of Health for permission to borrow £15,000 for works of conversion of privy middens to water closets.

CROWLE.—Four houses for Mr. J. Oxenforth.

DARTON.—Plans passed by U.D.C.: Mr. J. Meller, 8 houses off Old Mill-lane and 2 houses in School-street.

DERBY.—The Ministry of Health has decided to give favourable consideration to the project of the B.G. for the erection of a new infirmary.

DOVER.—Plans passed by R.D.C.: Bungalow, Chilton-avenue, River, Mrs. Hunt; bungalow, E. Langdon, Mr. Finn; bungalow Stonehall, Mr. Woodcock.

DUNFERMLINE.—At the Dean of Guild Court the Fife Education Authority were granted warrant to erect a new school for Catholic children at Rosyth Garden City. The school, which is to be built at Cross Roads-place, Rosyth, will be a construction of the Spiresque type, with accommodation for between 200 and 300 pupils.

EASINGTON.—The Minister of Health, in a letter to Mr. Sydney Webb, says that in addition to the 250 houses to be erected by Easington District Council, he has approved of proposals for assisting colliery proprietors and others to erect 1,868 dwellings in the Easington Rural District, making a total of 2,118 in all, within the present financial year.

EDINBURGH.—There were 59 cases before the Dean of Guild Court at its last sitting. Of these 33 were full petitions, 28 being granted. Among the warrants granted were: Edinburgh Education Authority—School at James-street, Leith, costing £30,000; Mr. J. Cradock, two-story house at Causeway, Duddingston; Mr. J. Davie, jun., villa at Craigiockhart-avenue; Mr. A. A. Duffield, bungalow and garage at Milton-road, Joppa; Mr. D. A. S. Forrester, bungalow at Riversdale-road; Miss D. Hill, villa at Kirkbrae, Liberton; Mr. W. T. King, villa at Milton-road, Joppa; Mr. C. M'Innes, bungalow at Saughton-road, Corstorphine; Miss M. H. Oliver, house and garage at Buckston-park; Mr. W. C. Rutherford, bungalow at Hailes-gardens, Colinton; Mr. A. Sim, two semi-detached villas at Riselaw-crescent; Mr. J. Whyte, two houses and a bungalow at Barony-terrace, Corstorphine.

EDLINGTON.—The West Riding Educational Committee are to erect a further school to accommodate 500 children at Edlington, a colliery district near Doncaster.

ETON.—Plans passed by R.D.C.: Houses at Taplow, for Mrs. G. Sherrett, Miss Dick and Mr. J. Whitfield; bungalow at Wexham, for Mr. H. D. Bowyer; house, Langley, for Mr. E. J. Cowles; lock-up shop at Boveney, for Mr. J. Pearson; bungalow at Denham, for Messrs. Adams; bungalow at Iver, for Mr. H. Evans; cottage at Datchet, for Mr. and Mrs. G. Kemp; house, Bath-road, Burnham, for Mr. L. G. Collyer; house at Langley, for Mr. Thurmott; bungalows at Iver, for Mr. W. Robinson and Mr. C. Page; house at Burnham, for Mr. F. Appleton; bungalow at Burnham, for Mr. S. G. Nicholls.

FAILSWORTH.—The D.C. have under consideration the widening of Walmsley Bridge so as to give a better footpath on the one side of the road.

FAIRHAVEN.—The Trustees of the Wesleyan Church have under consideration a scheme for the erection of a new Sunday school. Funds are being raised to meet the cost.

FARSLEY.—Plans passed: Conversion of premises in Town-street into a house and jeweller's shop, for Mr. Broadbent.

FENTON.—Messrs. Bunting, Ltd., brewers, are applying to the justices for sanction to make extensive structural alterations at the "Vulcan Arms."

FLEETWOOD.—Plans passed by U.D.C.: Two houses Warren-avenue South, for Mr. W. Cryer; shop, bakehouse, &c., Lord-street, for Mr. W. T. Barfield; 11 houses, Galloway-road, for Messrs. J. Cryer & Sons.—The sanction of the Ministry of Health has been received to the borrowing by the Council of £2,800 for the improvement of Fleetwood-road, and £2,384 for works of private street improvement.

GALASHIELS.—The T.C. has agreed to instruct the Burgh Surveyor to prepare plans for the erection of a new traffic bridge over the Gala between Park-street and Stirling-place.

GILDERSOME.—Plans passed: House for Mr. Crowther.

GOLCAR.—Plans passed by U.D.C.: Three houses, Leymour-road, for Messrs. Lunn & Kaye.

HEMEL HEMPSTEAD.—Plans passed by T.C.: Pair of cottages, Bennetts End-lane, for Mr. J. K. Hart; pair of cottages, Featherbed-lane, for Mr. J. Nash.

HINDLEY.—The D.C. have instructed their Surveyor to prepare plans for the erection of 15 houses of the working-class type.

KENILWORTH.—Plans passed by T.C.: 4 houses at Crackley Hill, Coventry-road, for the Midland Housing Company; house at Windy Arbour, by Mr. J. H. Lawrence, for Mrs. Woodward; house, for Mr. J. Crouch, at Fieldgate-lane.

LONDON (BERMONDSEY).—The B.C. has decided to demolish 151 dwellings of a very bad type in the neighbourhood of Salisbury-street, displacing 1,035 persons. Forty-nine families will be housed in Parish-street Workhouse, which is to be converted into flats. On the cleared site 52 cottages are to be erected at an estimated cost of £27,300, or £525 each. The total cost of the whole scheme is £71,050.

LONDON (LAMBETH).—Sanction has been given to the B.C. borrowing £18,729 for sewerage and paving works.

LONDON (PADDINGTON).—The B.C. proposes to reconstruct the concrete foundations and renew the wood paving of Edgware-road between Church-street and Maida-vale at an estimated cost of £10,285.——Buildings, abutting on Hereford-road and Chepstow-mews, for J. A. Bowden.

LONDON (POPLAR).—Plans passed by B.C.: Griggs & Son, lock-up shop in Chrisp-street.

LONDON (WANDSWORTH).—The L.C.C. has sanctioned the borrowing by the B.C. of £30,507 for paving work.

LOUGHBOROUGH.—A M.H. inquiry has been held on the application of the T.C. to borrow £9,075 in connection with the gas undertaking, the figures including £3,850 for new offices and showroom, £3,225 for meters and stoves, and £2,000 for mains.

MANCHESTER.—The Manchester Ship Canal Co., Ltd., of 41, Spring-gardens, are proposing to increase the depth of the canal for the first four miles from Eastham to Stanlow, which will then provide a water channel of 30 ft. The cost is estimated at several thousand pounds.—Manchester Libraries Committee have under consideration proposals to erect branch libraries on the housing sites, and have asked the Housing Committee to set aside sites for library purposes in the Wilbraham-road and Burnage estates.

MORTON.—The D.C. is seeking the co-operation of adjoining District Councils to assist in the proposed scheme for a new bridge over the River Trent to connect Notts and Littleborough.

NORTHAMPTON.—Plans passed by T.C.: House, Boughton-road, for Dr. A. G. Bull; house, Park-avenue South, for Miss E. M. Branch; garage, Christchurch-road, for Mr. F. H. Mardlin; house, Bowden-road, for Mr. Fisher; bungalow, Towcester-road, for Mr. J. Adnitt; extension to grand stand County Ground, for Northampton Town Football Club, Ltd.; extension to factory, Stimpson-avenue, for Messrs. J. Sears & Co., Ltd.; house, Harlestone-road, for Mr. Walker; house, Stanhope-road, for Mr. A. H. Warner; transformer house, Ardington-road, for Co-operative Wholesale Society, Ltd.; three garages, Birchfield-road, for Messrs. Lack & Rivett; two houses, Balmoral-road, for Messrs. Lack & Rivett; two houses, Towcester-road, for Mr. H. M. Scriven and Messrs. A. Glenn & Sons; house, Woodland-avenue, for Mr. H. A. Beeby.——Application is being made to the Ministry of Health for sanction to the borrowing of the following sums for road and sewer works: Boughton and Ruskin-road site, £866 12s.; back passage to same, £569 13s. 6d.; Harlestone-road site, £882 2s. 10d.

NORTHWICH.—The Ministry of Health has sanctioned a loan of £45,000 as a first instalment towards carrying out an extension of the Northwich water scheme in order that the work may be commenced immediately to absorb local unemployed.

NORWICH.—The Housing Committee has been asked by the T.C. to prepare and submit to the Council a scheme for the building of 1,000 houses "as an instalment."

OLDHAM.—The Corporation are proposing new works at the Blackstone Edge Waterworks, at an estimated cost of £196,000, to be carried out in three sections, and have under consideration the construction of a new drain as an improvement at Slacks Valley Sewage Works, estimated to cost £975.

POULTON-LE-FYLDE.—Plans passed by U.D.C.: Mr. R. B. Mather, detached house in Hardhorn-road; Mr. C. H. Bullock, 21, Lewtas-street, Blackpool, for house and shop in Higher Green; Mr. Edward Ellison, Holt's-lane, Poulton-le-Fylde, 2 cottages in Curzon-road.

PRESTON.—Lancashire Higher Education Committee recommend the following building programme for 1924–5:—Ashton-under-Lyne, new secondary school; Nelson, new secondary school; Waterloo, extensions of Girls' Secondary School; Urmston, site for grammar school; Chadderton, site for secondary school. Other work includes major alterations at Stretford Girls' School and Fairfield School, and improvements to playing fields at Middleton Queen Elizabeth Grammar School. The Elementary Education Sub-Committee programme includes new Council schools at Longton, Ashton-in-Makerfield, Crompton (Shaw), Little Hulton, Burtonwood, and Whitworth, and the acquisition of sites at Kearsley, Ainsworth, and Litherland. As a result of the conference with the Haydock War Memorial Committee, who suggested a Technical school as the local War Memorial, it has been suggested, on behalf of the County Council, that instead of this, there should be a building provided—a memorial hall—which could be divided into classrooms for use of elementary pupils and a special room for science instruction in evening classes. Director of Education, Mr. G. H. Gater, County Offices, Preston; County Architect, Mr. H. Littler, 16, Ribblesdale-place, Preston.

PUDSEY.—Plans passed: Structural alterations to Park Hotel, for Mr. Carter Smith.

ROMSEY.—Plans passed by R.D.C.: Bungalow, Luzborough, for Mr. G. F. Aish; bungalow, Whitenap, for Mr. C. Pearce.

SELBY.—It has been reported that the Aire and Calder Navigation Company have offered to contribute £2,500 towards the building of a new bridge over the Selby Canal. The new bridge will cost about £15,000.

SHERINGHAM.—Plans passed by U.D.C.: 2 bungalows, Common-lane, for Mr. R. W. Fetherstone; cottage, Sir Kenneth Kemp; tea room, Miss Vera Smith, in Holt-road; house, Mr. J. Cooper, Beeston-road; house, Miss Creuner, Holt-road; new road leading out of Common-lane, for Mr. A. J. Chapman.

SOWERBY BRIDGE.—An inquiry has been held by Inspector Mr. W. H. Collin, of the Ministry of Health, into a petition presented by the U.D.C. for an order sanctioning a scheme for the improvement of two areas in the town. Stansfield Court and district, and Old Causeway and district, are the respective areas. The scheme, if approved, is estimated to cost £20,091, exclusive of compensation. Strong opposition was shown at the inquiry.—The Wakefield Corporation are to apply for powers to acquire water rights and construct reservoirs in the Rushworth area.

STAFFORD.—The R.D.C. has passed plans for a house at Colwich, for Mr. R. Copeland.

STANLEY (YORKS).—Plans passed by U.D.C.: Two houses at Newton-hill, for Mr. Wm. Hogg; two houses and a cycle-shed at Leeds-road, for Mr. A. Green.

STOCKTON.—Plans have been passed by the U.D.C. for the following: 8 houses in Grange-avenue, and a pair of semi-detached bungalows in Allendale-road, for Mr. J. S. Earnshaw; 2 blocks of 2 houses in Imperial-avenue, for Messrs. Blackett's Construction Co., Ltd.; 2 bungalows in Bishopton-lane, for Messrs. Gibson & Brown.

SUNBURY.—The Thames Conservancy will spend £9,000 on enlarging Sunbury Lock.

SUNDERLAND.—Plans for a new bridge over the River Wear, at Sunderland, in substitution of the existing Wearmouth Bridge, have been prepared by Mr. Basil Mott, civil engineer, of Westminster. These provide for a bridge with a 300 ft. span, and a width of 80 ft., with a possibility of increasing this to 90 ft., at an estimated cost of about £300,000.

TYNEMOUTH.—Plans passed by T.C.: Two houses, corner Hotspur-street and Syon-street, Tynemouth, by Mr. W. Stockdale, for Messrs. B. Peel & Son.

UPPINGHAM.—Plans for the extension of the Victoria Buildings in connection with Uppingham School have been approved by the U.D.C.

WAKEFIELD.—Plans passed by R.D.C.: Butcher's shop at Walton, for the accommodation of W. G. Armstrong-Whitworth's workmen; house at Calder-grove, for Denby Grange Collieries, Ltd.; plans approved of houses for subsidy: 2 houses at Baptist-hill, Crigglestone, for Bettley & Mitchell; house at Main-street, Crigglestone, for F. Heaton; house at Shariston Common, for W. E. Day; 6 houses at Shariston Common, for W. Fisher; house at Sandy-lane, Middlestown, for Wm. Builth; 2 houses at Durkar-lane, Crigglestone, for Lister & Shaw; 6 houses at Wood-lane, Walton, for New Shariston Colliery Co.; house at Coxley-lane, Shitlington, for Mr. F. Gill; house at Coxley, Shitlington, for Coxley Mills Co., Ltd.; house at Carr's-lane, Middlestown, for Mr. H. Poole; 2 houses at Potoven's lane, Kirkhamgate, for Mr. H. Lindley. The question of subsidy for 32 houses, to be erected at Upper Cropton, by the Nostell Colliery Co., Ltd., will be considered when plans showing allotments reserved to each house are submitted. The Shariston Colliery Company propose to erect 50 houses at Walton, and the Council 30 houses at Walton by direct labour.

WALTON.—The L.M. & S.R. Co. have undertaken to construct a new bridge across the road recently diverted by them, known as the Haw Park-road.

(*Continued* on p. 837.)

* See also our List of Contracts, Competitions, etc.

PRICES CURRENT OF MATERIALS.*

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 2 0
Second Hard Stocks	3 17 0

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 13 3	Best Blue Pressed Staffs.	9 11 6
Do. grooved for plaster	2 15 3	Do. Bullnose	10 1 6
Do. Bullnose	3 8 3	Blue Wire Cuts	7 11 6
Best Stourbridge Fire brick:—			
2½ in.	11 3 0	3 in.	13 2 0
GLAZED BRICKS—			
Best White Ivory, and Salt Glazed Stretchers	22 0 0	D'ble Str'tch'rs	30 10 0
		D'ble Headers	27 10 0
Headers	21 10 0	One Side and two Ends	31 10 0
Quoins. Bullnose and 4½ in. Flats	28 10 0	Two Sides and one End	32 10 0
		Splays and Squints	30 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	2 1	3 in. per yd. super	2 9
2½ in. "	2 5	4 in. "	3 7

	s. d.	
Thames Ballast	10 6	per yard.
Pit Sand	14 9	" "
Thames Sand	15 6	" "
Best Washed Sand	15 6	" "
¾ in. Shingle for Ferro-Concrete	14 0	" "
¼ in. "	15 0	" "
¼ in. Broken Brick	10 6	" "
Pan Breeze	5 6	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement, British Standard Specification Test £2 18 0 to £3 3 6

51/- alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 9 6
" Finish	3 17 6
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	2 13 6
Hair	17 0 0
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months, carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 9½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	2 11½
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4
Do. do. delivered on road wagons at above stations, per ft. cube	4 5
White basebed, 3d. per ft. cube extra.	
NOTE.—½d. ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.	
HOPTON-WOOD STONE.	
Delivered at any Goods Station, London.	
Small random blocks, up to 10 ft. cube. Per ft. cube	7/-
Random blocks from 10 ft. and over "	17/-
Sawn two sides "	27/-
Sawn three or four sides "	32/-
YORK STONE, BLUE—*Robin Hood Quality.*	
Delivered at any Goods Station London.	s. d.
6 in. sawn two sides landings to sizes (under 30 ft. super.) Per Ft. Super	5 3
6 in. rubbed two sides, ditto "	5 9
3 in. sawn two sides slabs (random sizes) "	2 1½
2 in. to 2½ in. sawn one side slabs (random sizes) "	1 5½
1½ in. to 2 in. ditto, ditto "	1 3
HARD YORK—	
Delivered at any Goods Station London.	
Scappled random blocks Per Ft. Cube	5 6
6 in. sawn two sides landing to sizes (under 40 ft. super.) Per Ft. Super	5 4½
6 in. rubbed two sides ditto "	6 0½
4 in. sawn two sides slabs (random sizes) "	2 10
3 in. ditto. ditto "	2 5
2 in. self-faced random flags Per Yard Super	7 11

ARTIFICIAL STONE.

	s. d.
Delivered in London Area in full van loads.	
Plain per ft. cube	6 6
Moulded " "	7 9
Cills " "	8 3

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£24 0	3 × 6	£25 0
4 × 9	24 0	3 × 11	34 0
4 × 8	29 0	2 × 11	34 0
4 × 7	28 0	3 × 9	33 0
3 × 8	26 10	2½ × 9	33 0
3 × 7	26 0	3 × 4½	24 0
2½ × 7	26 0	3 × 4	24 0

WOOD (*Continued*).

PLANED BOARDS.

1 × 11	£38 10	1 × 9	£36 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	21/-	1½	33/6
¾	23/-	1½	38/6
1	26/6		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	26/6
1½	33/6
1½	38/6

MATCHINGS (BEST).

Inches	per sq.
¾	17/6
¾	22/-
1	26/-

BATTENS

Inches	s. d.
¾ × 2	2 4 per 100 ft.

SAWN LATHS.

Per bundle				0	2 10
Dry Wainscot Oak, per ft. super, as inch	0	2 0	to	0	2 6
¼ in. do. do.	0	1 6	to	0	2 0
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0	1 9	to	0	2 6
Cuba Mahogany	0	3 0	to	0	3 6
Teak (Rangoon, Moulmein or Java), per load	45	0 0	to	50	0 0
American Whitewood planks, per ft. cube	0	14 0	to	0	16 0
Best Scotch Glue, per cwt.	4	10 0	to	—	
Liquid Glue, per cwt.	4	7 0	to	5	10 0

SLATES.

1st quality slates from Bangor or Portmadoc in truck loads delivered London area. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 7 6
Ditto hand made ditto	5 12 6
Ornamental ditto	5 17 6
Hip and valley tiles (per dozen) Hand made	0 9 6
Machine made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

	£ s. d.
R. S. Joists, cut and fitted	13 10 0
Plain Compound Girders	15 10 0
" Stanchions	17 10 0
In Roof Work "	20 10 0

MILD STEEL ROUNDS.
To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	16 10 0	⅝ in. to ¾ in.	13 10 0
⅜ in.	14 10 0	⅞ in. to 2½ in.	13 0 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Gas	52½%	52½%	62½%
Water	47½%	47½%	57½%
Steam	42½%	42½%	52½%
Galv'd—			
Gas	37½%	42½%	52½%
Water	31½%	37½%	47½%
Steam	25 %	32½%	42½%

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/1½	11d.	3½d.
3½ in.	1/2½	1/0½	3½d.
4 in.	1/4	1/1½	3½d.
4½ in.	1/5½	1/4	4d.
5 in.	1/7½	1/5½	5d.

O.G. GUTTERS.

3 in.	1/6½	1/2½	3½d.
3½ in.	1/6½	1/2½	3½d.
4 in.	1/7½	1/4	3½d.
4½ in.	1/9½	1/6½	4d.
5 in.	2/1½	1/9	5d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/7½	1/1½	1/8
2½ in. "	1/9½	1/4	2/0½
3 in. "	2/1½	1/8	2/5½
3½ in. "	2/6½	1/11½	2/10½
4 in. "	2/11½	2/4½	3/5½

L.C.C. COATED SOIL PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts plain	3 0½	2 2½	2 8
2½ in. "	3 6½	2 5½	3 3½
3 in. "	4 2½	2 8	4 0½
3½ in. "	4 7	3 3½	4 8½
4 in. "	5 1	3 9½	5 5

L.C.C. COATED DRAIN PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	4 9	5 8	8 10
4 in. " "	6 3	6 8	11 4
5 in. " "	7 6	11 6	18 2
6 in. " "	8 10	14 4	23 5

Per ton in London.

IRON—	£ s. d.		£ s. d.
Common Bars	13 10 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 0 0	..	15 0 0
Staffordshire "Marked Bars"	17 0 0	..	18 0 0
Mild Steel Bars	12 10 0	..	13 10 0

METALS (*Continued*).

	£ s. d.		£ s. d.
Steel Bars, Ferro-Concrete quality, basis price	13 0 0	..	14 0 0
Hoop iron, basis price	16 10 0	..	17 10 0
Galvanised	31 0 0	..	32 0 0
Soft Steel Sheets, Black—			
Ordinary sizes to 20 g.	15 0 0	..	16 0 0
" " " 24 g.	16 0 0	..	17 0 0
" " " 26 g.	18 0 0	..	19 0 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	22 10 0	..	23 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	24 10 0	..	26 10 0
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	22 0 0	..	23 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	24 0 0	..	25 0 0
Sheets Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6ft. by 2ft. to 3ft. to 20g. and thicker	23 10 0	..	24 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 10 0	..	26 10 0
Best Soft Steel Sheets, 26 g.	26 0 0	..	27 0 0
Cut Nails, 3in. to 6 in.	20 10 0	..	22 0 0
(under 3in. usual trade extras.)			

METAL WINDOWS—Standard sizes suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1/4 to 1/7 per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet. English, 4 lb. and up	41 10 0
Pipe in coils	42 0 0
Soil Pipe	45 0 0
Compo pipe	47 10 0

NOTE—Country delivery, 30s. per ton extra; lots under 3 cwt., 2s. per cwt. extra and over 3cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

	£ s. d.	
Old lead, ex London area, at Mills per ton	27 0 0	—
Do., ex country, carriage forward per ton	28 0 0	—

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2in.
7/6	11/6	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES. S.P.

½ in.	¾ in.	1 in.	1½ in.	1¾ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1½ in.	1¾ in.	2 in.	3 in.	
8 lbs. P. traps	33/-	41/-	56/-	101/-	per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/-	

COPPER—	£ s. d.	
Strong Sheet per lb.	0 2 3	.. —
Thin "	0 2 4	.. —
Copper nails "	0 2 3	.. —
Copper wire "	0 2 4	.. —
TIN—English Ingots "	0 2 3	.. —
SOLDER—Plumbers' "	0 1 0	.. —
Tinmen's "	0 1 2	.. —
Blowpipe "	0 1 4	.. —

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes per gallon	0 3 10
" " " in barrels "	0 4 0
Boiled " " in drums "	0 4 3
" " " in barrels "	0 4 4
" " " in drums "	0 4 3
Turpentine in barrels "	0 6 6
" in drums (10 gall.) "	0 6 9
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	56 5 0
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms," "Park," "Supremus" and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered	79 10 0
Red Lead, Dry (packages extra) per ton	43 0 0
Best Linseed Oil Putty per cwt.	0 16 0
Filocoa per cwt.	0 15 6
Size, XD Quality per firkin	0 3 6

[Concluded on next page.]

* The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. fourths	3½d.	32 oz. fourths	8½d.
15 ,, thirds	4½d.	32 ,, thirds	10½d.
21 ,, fourths	5d.	Obscured Sheet, 15 oz.	4d.
21 ,, thirds	6½d.	21 ,,	5½d.
26 ,, fourths	6d.	Fluted 15oz. 6½d., 21oz.	9½d.
26 ,, thirds	7½d.	En'lled 15 ,, 5½d., 21 ,,	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
¼ Rolled plate	4½d.
⅛ Rough rolled	5½d.
⅛ Rough rolled	5½d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal flatting	ditto	1 0 6
Hard drying Oak	ditto	0 18 0
Fine Hard drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 0
Best Black Japan		0 12 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 9 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 6
Liquid Dryers in Terebine		0 9 0
Quirass Black Enamel		0 7 0

PROPOSED NEW BUILDINGS.

(*Continued from page* 865.)

WASHINGTON (DURHAM).—Washington Coal Co. have evolved a housing scheme for the benefit of their workmen at the Glebe Colliery, which is receiving encouraging support and approval from the men. The company undertake to provide sites free for employees, and to pay all charges for transfer deeds, &c., and are to provide at cost price all materials, together with carriage charges. The purchaser will receive the benefit of the Government subsidy, estimated at £75 per house, and the houses, which are to be of three or four rooms, with bathroom and garden, will it is estimated, cost £220 and £295 respectively. The minimum deposit on the agreement being signed will be £5, and the company will receive interest at the rate of 3 per cent. per annum on outstanding balances.

WHICKHAM.—Through the enterprise of Priestman's Collieries, Ltd., who are at present engaged in the sinking of a new colliery at Watergate, near Whickham, a new mining village is shortly to be created in that district. Messrs. Watson & Scott, architects, Newcastle, on behalf of the company, presented to the R.D.C. an estate plan showing the lay-out of approximately 24½ acres, and providing for 295 houses, or 12 houses per acre, and a range of shops. The plan was approved.

WHITBY.—Whitby builders, after conference with the local Urban Council, have decided to proceed with the erection of 14 subsidised houses on the west side, and eight applications have been received for sites on Gallow's Close Estate on the east side. The work, together with the erection of the war memorial, cottage hospital, and a large ballroom at the Royal Hotel, is expected to commence at an early date.

WOLVERHAMPTON.—Thirty acres of land on the Beckminster Estate, near Wolverhampton, adjoining the Birches Barne Estate, are about to be developed by the Corporation for housing, the Ministry having given the necessary sanction. The construction of roads and sewers will be carried out by direct labour.

WORCESTER.—The E.C. have had reported to them by the Sites and Buildings Sub-Committee the necessity for a new classroom and new out-offices, at an estimated cost of £750, for the Badsey C. School.

WREXHAM.—An inquiry has been held by Mr. A. W. Brightmore, on behalf of the Ministry of Health, with reference to an application by the Corporation for sanction to borrow £5,870 for the purposes of an open-air swimming-bath and eight additional slipper-baths. ——The R.D.C. have made application to the M.H. for sanction to erect 200 houses. The Ministry have replied, sanctioning an immediate start to be made on 50 houses.

FIRES.

LOWESTOFT.—The Public Hall, London-road, one of the amusement centres in the town, has been destroyed by fire.

PORTSMOUTH.—A fire has destroyed the corset factory belonging to Messrs. Charles Bayir & Co., Ltd., of London.

THE SCOTTISH BUILDER

NEW BUILDINGS IN SCOTLAND.

Ayr.—Plans have been forwarded to the Board of Health for their approval for the erection of 50 two-apartment houses.

Girvan.—The T.C. has decided to erect 16 two-apartment houses and 12 three-apartment houses, making a total of 88 new houses in all under the municipal scheme.

Turriff.—The T.C. has decided to erect four houses, the plans for which were prepared by Mr. W. L. Duncan, architect.

Arbroath.—The Forfarshire Education Authority has agreed to erect a hut for a new classroom at Arbroath High School. The cost is estimated at £178, excluding the heating apparatus.

Bishopmill.—The Moray Education Authority has given instructions to the Clerk to obtain estimates for providing an additional cloakroom for the children, and a retiring room and lavatory accommodation for the teachers at Bishopmill School.

Largs.—The T.C. has decided, in view of the expenditure proposed by the London, Midland & Scottish Railway Co., to draw the company's attention to the inadequacy of Largs Station, which was erected in 1885 as a temporary erection, and to suggest that the existing wooden structure should be replaced by a station constructed of stone.

Kilsyth.—William Baird & Co., Ltd., coal-masters, have stated to the T.C. that they intend to erect 50 to 60 houses on the two-story tenement principle, in substitution for what is presently known as the "Brick Rows," and have asked the Council to grant £100 for each house. The London & North Eastern Railway Co. has also informed the Council that it intends to build houses, and desired to know what the Council is prepared to give for a subsidy.

Musselburgh.—The T.C. has decided to erect a golfers' pavilion on the links.

NEW COMPANIES.

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 & 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

COLE, LOASBY & CO., LTD. (192,896). Registered October 5. 45, Museum-street, Bloomsbury, W.C. Builders, contractors and decorators, heretofore carried on by Fred Walter Loasby at 45, Museum-street, London, 274, Hither Green-lane, and 237, Springbank-road. Nominal capital, £5,000.

CRANSTONS, LTD. (192,993). Registered October 10. 32, Bedford-row, W.C.1. Builders and contractors, surveyors, &c. Nominal capital, £100.

FRANCIS FLOWER & SONS, LTD. (192,994). Registered October 10. Gurney Slade, Somerset. Quarry masters and stone merchants, now carried on by Albert Edgar Flower and Samuel Wollen at Gurney Slade, Somerset, under the style of Francis Flower & Sons. Nominal capital, £6,000.

WILLIAM ROBINSON (BUILDING CONTRACTORS), LTD. (193,056). Registered October 12. 19, Charing Cross-road, W.C. To carry on the business of building contractors. Nomina capital, £1,000.

W. D. HORWOOD, LTD. (193,387). Registered October 27. 19, Charing Cross-road, W.C Building contractors. Nominal capital, £1,000.

GOOD & HENSON, LTD. (193,300). Registered October 24. Builders and contractors &c. Nominal capital, £3,000.

Contract Open.

DECEMBER 10.—**Morar.**—ARCHWAY.—Erection of memorial archway, Morar, for the Committee of the North Morar War Memorial. All particulars, Bank of Scotland, Mallaig.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Brick layers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Brick-layers' Labourers.	Masons' Plasterers' Labourers.
Aberdeen	1/7	1/8	1/7	1/8	1/7	1/7	1/4½	1/-	
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Alexandria	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Arbroath	1/7	1/6	1/6	1/7	1/6	1/6	1/5	1/1	
Ayr	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Bathgate	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/1 to 1/2	
Blairgowrie	1/7	—	1/7	1/7	1/7	1/7	1/6½	—	
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Dumbarton	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Dumfries	1/5	1/5	1/5	1/6	1/5	1/6	1/5	1/1 to 1/2	
Dundee	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Edinburgh	1/7	1/7	1/7	1/8	1/8	1/7	1/6½	1/2½	
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Fort William	1/7	1/6	1/6	1/7	1/6	1/6	1/6½	1/1½	
Galashiels	1/5	1/5	1/5	1/6	1/5	1/5	1/5½	1/1	
Glasgow	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/1 to 1/2	
Hamilton	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Hawick	1/5	1/5	1/5	1/6	1/5	1/5	1/5½	1/1½	
Helensburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Inverness	1/3½	—	1/3	1/4	1/4½	1/4	1/3½	10d. to 1/2	
Kilmarnock	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Kirkwall	1/7	1/5	1/3	1/4	1/4	1/4	1/4	1/-	
Lanark	1/7	1/7	1/7	1/8	1/7	1/7	1/5½	1/2½	
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Motherwell	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Perth	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Stirling	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Stirlingshire (Eastern District)	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Wishaw	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 861.

CURRENT PRICES FOR BUILDING WORK IN LONDON.*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	6
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	35	0
Add if in underpinning in short lengths	" "	7	6
Add if in floors 6 in. thick	" "	3	6
Add if in beams	" "	4	0
Add if aggregate 1 : 2: 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	3	3

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	2	0	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	1
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	9	0
¾ inch on flats in two thicknesses	" "	6	6
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	3

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	6
York stone sills fixed	" "	21	6
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	19	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	3
Do. joists	" "	5	9
Do. roofs, floors and partitions	" "	6	3
Do. trusses	" "	8	3

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	38/-	44/-	50/-	80/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.		¾"	1"	1¼"	1½"
Deal edges shot	per sq.		49/-	58/-	67/-
Do. tongued and grooved	"		54/-	65/-	72/-
Do. matchings	"	45/-	55/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	4
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.		1¼"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/8	1/9	2/0
Deal shelves and bearers	"	1/5	1/7	1/10
Add if cross tongued	"	2d.	2d	2d

STAIRCASES.	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run.	0	9
Mahogany handrail; average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).			
6 in. barrel bolts	8½d.	Rim locks	2/4
Sash fasteners	11½d.	Mortice locks	5/3
Casement fasteners	1/5	Patent spring hinges and letting in to floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	17	0
Plain compound girders	"	20	0
Do. stanchions	"	23	0
In roof work	"	28	0

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/11	2/4½	3/-	4/-
Ogee Do. Do.	"	2/4½	3/1	3/10	4/9
Rain-water pipes with ears	"	2/9	3/7		
Extra for shoes and bends	each	4/4	5/11		
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt	54	0
Do. Do. in flats	"	52	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft run.	0	6
Soldered seam	" "	1	6
Copper nailing	"	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	11d.	1/8	1/11	3/5	4/2	
Do. service	"	1/7	2/1	2/6	3/10		
Do. soil	"						6/10
Bends in lead pipe	each					3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"				14/7	19/6	
Bib cocks and joints	"	6/4	9/7	15/4	41/-		
Stop cocks and joints	"	15/4	17/2	25/8	64/-		

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	3
Do. Do. Sirapite	" "	2	6
Do. Do. Keen's	" "	3	6
Add sawn lathing	" "	1	5
Add metal lathing	" "	2	3
Portland cement screed	" "	1	10
Do. plain face	" "	3	0
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	9
26 oz. Do.	" "	1	1
Obscured sheet	" "	1	3
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	11
¼ in. wired cast plate	" "	1	5

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece	2/-	to 4/-

* These prices apply to new buildings only. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 11 should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes accepted. † Denotes provisionally accepted.
‡ Denotes recommended for acceptance.
§ Denotes accepted subject to modifications.

BARLBY.—For erection of a Council School, for the East Riding of Yorks C.C. The County Architect, County Hall, Beverley:—

J. H. Carr & Sons, Selby £6,010

CANNOCK.—For carrying out sewage works at Huntington, for the R.D.C.:—

*Sharpe & Son, Cannock £2,033 8

CHEPSTOW.—For conversion of Larkfield, Chepstow, into a central school, for the Monmouthshire Education Committee:—

*Dawkins, Harris & Weaver, Chepstow £3,875

CHEPSTOW.—For extension of water main at Portskewett, for the R.D.C.:—

*Jackson & Baker £131 10

CLEOBURY.—Repairs and structural alterations to the Union Infirmary, for the Board of Guardians:—

*H. E. Pritchard, Kidderminster.

CLEWER.—For erection of 32 houses, for the Corporation. Borough Surveyor, Alma-road, Windsor:—

Norris, Sunningdale	£10,909 0
Moss, Southend	18,622 0
McCarthy & Co., London	18,200 0
Wheeler Bros., Reading	18,000 0
Cole, Ltd., Luton	17,230 0
Brasher & Son, Wallingford	16,771 3
Lane & Hendry, Windsor	16,440 0
Boot & Sons, London	16,200 0
Parthon Bros., Maidenhead	15,950 0
Lacey & Son, Luton	15,850 0
King, Northampton	15,400 0
*Winters, Ltd., South Norwood	15,279 0

DUKESTOWN (MON.).—For erection of a new temporary infants' school at Dukestown, for Monmouthshire Education Committee:—

*H. Smith, Cross Keys £2,050

DURHAM.—For painting at Council Schools, for the E.C.:—

Marley-hill School—	
Stephenson Bros.	£180 0 0
J. Burdon	120 0 0
*H. Nicholson, Dunston-on-Tyne	98 0 0
Blaydon West School—	
J. Burdon	500 0 0
Smith & Jewitt	460 0 0
J. E. G. Wright	401 0 0
A. Brooks	394 15 0
J. W. Alexander	345 18 0
Stephenson Bros.	344 0 0
J. T. Wilson	328 0 0
W. S. Hetherington	325 0 0
J. B. Dobson	306 8 6
*R. M. Reed, Whickham	305 0 0
Greenside School—	
J. Burdon	230 0 0
M. Hopper	193 0 0
J. T. Wilson	154 0 0
R. Hall	149 0 0
Stephenson Bros.	144 0 0
*J. A. Turnbull & Son, Ryton-on-Tyne	125 0 0
Whickham School—	
J. Burdon	250 0 0
H. Nicholson	170 8 0
Stephenson Bros.	169 0 0
R. M. Reed	150 0 0
*M. Hopper & Son, Dunston-on-Tyne	149 0 0
Emmaville School—	
J. Burdon	287 0 0
J. A. Turnbull	190 10 0
Summerside Bros.	184 0 0
R. Hall	178 0 0
Stephenson Bros.	172 0 0
*J. T. Wilson, Ryton-on-Tyne	170 10 0
Highfield School—	
J. Burdon	157 0 0
M. Hopper	149 0 0
J. Short	147 5 0
Stephenson Bros.	137 0 0
Smith & Jewitt	136 10 0
*Summerside Bros., Blaydon-on-Tyne	130 0 0

FERNDALE (RHONDDA).—The Rhondda U.D.C. has accepted on Ministry of Health approval the following tender for erection of 30 non-parlour type houses at the Ferndale housing site:—

*John Thomas, Rhondda £13,500

FERNDALE (RHONDDA).—For laying of sewers, and road construction, in connection with Ferndale housing scheme:—

*A. G. Collins & Co., Barry .. £1,278 6 0

FLEETWOOD.—Erection of 50 houses in Shakespeare-road, for the U.D.C.:—

*M. J. Gleeson—	
For parlour type	£444 17 6
For non-parlour type	374 3 4

GALASHIELS.—For erection of 18 houses in 3 blocks of two- and three-apartment houses, for the T.C. Messrs. J. & J. Hall, architects, Galashiels. Quantities by architects:—

Mason, &c., work—	
*P. & D. Dalgliesh, Galashiels	£3,127 13 1
Joiner, &c., work—	
*James A. Grant, Galashiels	2,377 5 3
Plumber and gasfitter work—	
*B. Ruthven & Son, Galashiels	1,151 12 11
Plaster and cement work—	
*James Gardiner, Galashiels	593 9 6
Slater work—	
*L. McLaren & Sons, Galashiels	184 0 6
Painter work—	
*Norfolk Decorators, Ltd., Glasgow	194 19 9
Glazier work—	
*David J. Hope, Galashiels	57 6 1

GOOLE.—For erection of 12 "A" Type houses and 12 "B" Type houses on Pasture-road site, for the U.D.C. The Surveyor, Council Offices, Goole:—

Platt & Featherstone, Goole—A Type £5,242
B Type 6,020

GUISBOROUGH.—For new water main at Darley, for the U.D.C.:—

Guthrie, Stockton	£199 0 0
B. Padget, Brotton	160 7 9
C. Jackson, Whitby	156 0 0

H.M. OFFICE OF WORKS.—Accepted during October:—

Building Works: Bethnal Green Housing Scheme—Tarmac work: Constable, Hart & Co., Ltd., London, E.C. Birmingham Post Office Factory—Plasterer: G. Prince, Birmingham; slater: Fergusson & Sons, Leicester. Camberwell Housing Scheme—Tarmac work: J. Wainwright & Co., Ltd., London, N.W. Didsbury Telephone Exchange—Erection: J. Gerrard & Sons, Ltd., Manchester. Edinburgh, General Register House—Alterations: Colin Macandrew, Ltd., Edinburgh. Edinburgh, Royal Botanic Gardens—Erection of plant relief house: Topping & Co., Edinburgh. Gloucester Telephone Exchange—Painter: Conway Jones & Co., Ltd., Gloucester. Halifax P.O., &c., Commercial-street—Extension: Mullen & Durkin, Ltd., Burnley. Hammersmith Sorting Office—Reconstruction of front wall, &c.: Chas. Watts & Co., London, W. Hampton Court, Great Hall roof—Steel reinforcement: Joseph Westwood & Co., Ltd., London, E. Hampton Court Park, Barge-walk—Repairs, &c., to wall and roadway: John Mowlem & Co., Ltd., London, S.W. Holloway, N., Money Order Department—Redrainage, &c.: Dent & Hellyer, Ltd., London, W.C. Liverpool, Ministry of Pensions, St. Anne's-street—Alterations: Hughes & Stirling, Liverpool; plumber, glazier and decorator: Thos. McHugh, Liverpool.

Maintenance Work: Barry Dock District: Vickery Bros., Barry Dock. Beacon and Lickey Hostels (Birmingham): J. E. Harper & Son, Ltd., Birmingham. Burton-on-Trent District: Thomas Lowe & Sons, Ltd., Burton-on-Trent. Hartlepool District: C. Turnbull & Son, West Hartlepool. Huddersfield District: Edwin Dyson & Sons, Huddersfield. Lincoln District: Edward Scarborough, Lincoln. Middlesbrough District: W. A. King & Sons, Ltd., Middlesbrough. Norwich District: Leonard Lincoln, Norwich; plumber: G. Marshall, Norwich. Sunderland District: W. B. Cooper & Sons, Ltd., Sunderland. Wigan District: John Johnson & Son, Wigan. Morriston Housing Scheme—Painter: Fred Morgan, Morriston. Mount Pleasant Letter Office—Asphalter: The London Asphalte Co., Ltd., London, E.C.; concrete work: Stuart's Granolithic Co., Ltd., London, W.C.; plumbing and c.i. drainage: W. H. Early, London, S.W.; rubbish remover: Henry Allen, Ltd., London, E.; steelwork: James Allan, senr., & Sons, Ltd., London, E.C. Rampton State Institution—Slater and tiler: Dawber, Townsley & Co., Ltd., Grimsby. Rhyl, "Plas-Glan-y-don"—Adaptation for telephone exchange: David Griffiths & Son, Rhyl. Roundhay, Leeds, Telephone Exchange—Asphalter: Tunstalls Seyssel & Limmer Rock Asphalte Co., Ltd., Leeds; bricklayer and mason: S. Flockton, Leeds; painter: R. Robinson, Bradford; plasterer: The Exors. of John Dobson, Leeds; plumber and glazier: Pearton Bros., Leeds; smith and founder: Leonard Cooper, Ltd., Leeds. Royal Mint—Reconstruction on East side: William Lacey, Hounslow; steelwork: Redpath, Brown & Co., Ltd., London, E.C.; stonework: G. F. Simmons, Hounslow. Rugby, P.O. Wireless Station—Erection of experimental building: Foster & Dicksee, Ltd., Rugby. Victoria and Albert Museum, South Kensington—Repairs to tile floors, &c.: Diespeker & Co., Ltd., London, E.C. Whitley Bay Post Office—Steelwork: Dorman, Long & Co., Ltd., London, S.W.

Engineering Services: Barnsley P.O.—Heating: Buckleys (London), Ltd., London, W.C. Golders Green Telephone Exchange—Heating: Cannon & Hefford, London, S.E. Somerset House, W.C.—Wiring: Samuel Reed & Sons, London, S.E. Southport P.O., &c.—Heating: Wm. Griffiths, Sons & Cromwell, Ltd., Liverpool. Windsor Castle Gardens—Boiler, &c.: Buckleys (London), Ltd., London, W.C.

Painting: Dilliway & Elvy, London, W.; J. Scott Fenn, London, S.E.; M. Greenwood & Son, Ltd., London, W.; Douglass Haise & Co., Ltd., London, S.E.; Hylton & Son, Lincoln; E. D. Winn & Co., Ltd., London, S.W.

INVERNESS.—For erection of two blocks of four-roomed houses at Lochalsh-road, and painter and glazier work in connection with erection of three blocks on same site. Mr. J. Hinton Gall, architect, Lombard-street, Inverness:—

Masons—	
*Maclean & Son, Cawdor-road, Inverness	£541 15 10
Carpenter—	
*Wm. Grant, Celt-street, Inverness	£554 6 0
Slater—	
*J. Reid, Kenneth-street, Inverness	134 8 0
Plumber and drains—	
*H. Fraser, Rose-street, Inverness	260 5 2
Plasterer—	
*Wm. Johnstone, Kenneth-street, Inverness	182 0 0
Painter—	
*T. Tulloch, Church-street, Inverness	61 9 0

KIRKBURTON.—For erection of 12 cottages in Turnshaw-road, for the U.D.C. Messrs. Abbey & Hanson, architects, 11, Cloth Hall-street, Huddersfield:—

Mason and bricklayer—	
J. W Boothroyd, Ltd., Huddersfield	£2,315 0 0
Joiner—	
David Light, Huddersfield	969 18 0
Plumber—	
H. C. Stringer, Huddersfield	631 11 6
Slater—	
Richard Fletcher, Ltd., Blackburn	352 15 0
Plasterer—	
Thornton & Kitchingman, Huddersfield	392 7 6
Painter—	
J. W. Cornes, Huddersfield	85 0 0

LEEDS.—Erection of new residents' bathrooms at the General Infirmary:—

*Wm. Sott & Son, Leeds.

LEEDS.—Rock asphalte paving in New Briggate and lower Briggate, for the Highways' Committee o the Leeds Corporation:—

*Tunstall's Seyssel & Limmer Rock Co., Ltd., Leeds £987

LEEDS.—Erection of new banking premises near Old Oak, Headingley, for the Bank of Liverpool & Martin's, Ltd. Messrs. Gotch & Saunders, architects, Kettering:—

*Wm. Simpkiss, Highgate Works, Hunslet, Leeds.

LEEDS.—Erection of an electricity transformer chamber at Devonshire-avenue, Roundhay, for the Leeds Corporation Electricity Committee:—

Main contract—John Ferguson & Sons, Ltd.
Asphalter—Tunstall's Rock Asphalte Co., Ltd. } £461 18 6

LEEDS.—Structural alterations and extensions to the Premier Picture House, Briggate, Leeds:—

*Wm. Thompson & Sons, Leeds.

LEEDS.—Erection of new hotel, "Middleton Arms," comprising café, billiard-rooms, lounges, &c. for Messrs. Ind, Coope, Ltd., Burton, Brewers:—

Mason—Chas. Higgins, Roseville-road.
Joiner—Banks Mawson, Sheepscar.
Steelwork—Leonard Cooper, Balm-road.
Asphalter—Tunstall's Rock Asphalte Co., Ltd. Crown Point Bridge.
Wood block and terrazzo work—T. K. Yeates & Co., Albion-street.
(All of Leeds.)

LONDON.—For building work at 108, Sutton-road, Muswell Hill. Mr. George W. Newman, architect, 140, Wellington-road, Bush Hill Park, Enfield:—

G. Groves & Son, Tottenham	£206 0 0
G. Smith & Son, Muswell Hill	198 0 0
*J. Stewart & Sons, Tottenham	196 0 0
A. Harston & Co., Tottenham	189 5 0
S. G. Goulding, Hornsey	184 19 6
W. H. Barley, Tottenham	154 18 0

LONDON.—For the erection of public slipper baths in Church-street, for the Stoke Newington B.C.:—

*Harris & Wardrop £4,143

LONDON.—For provision of hot-water supply to baths, to be erected in Church-street, for the Stoke Newington B.C.:—

*Air-Vent Heater Co. £789

LONDON.—Supply of 400 ft. run of 12 in. by 8 in Cornish granite kerbing to the Battersea B.C.:—

*E. Matthews & Co.—4s. per foot run.

LONDON.—For repaving Tudor-place with asphalte, for the St. Pancras B.C.:—

Limmer & Trinidad Lake Asphalt Co., Ltd., "Litho-crete" asphalt, at 11s. per yd. super, including free maintenance for two years.
London Asphalt Co., Ltd., granited mastic asphalt paving, at 10s. 3d. per yd. super, including free maintenance for five years.
*Val de Travers Asphalt Paving Co., Ltd., granited mastic asphalt, at 10s. per yard super, including free maintenance for five years.
Whitehall Asphalt & Engineering Co., Ltd., "Durophalt" at 9s. 9d. per yd. super, including free maintenance for six years.

METROPOLITAN ASYLUMS BOARD.—The following tenders have been accepted by the Board:—

Joyce Green Hospital—Covering boilers with non-conducting composition.

Hobdell, Way & Co.	£165 0 0
Keenan, Matthew & Co.	163 0 0
C. Goodman & Co.	150 0 0
Reid, Macfarlane & Co.	140 0 0
Cape Asbestos Co.	120 5 0
*Sutcliffe Bros. & Bryce, Ltd., Voluntary-place, E.11	118 10 0

The Downs' Hospital—Formation of engineer's office and workshops.

A. Abberly	£350	0	0
Burnard & Pickett	15	0	0
R. E. Shaw	235	0	0
W. Bickerton	230	0	0
A. A. Secrett	227	0	0
*T. W. Heath, Ltd., Chelsea	220	0	0

Training Ship Exmouth II—Repairs. Estimate based on schedules.

P. Tye & Co.	£645	0	0
London Graving Dock Co.	640	10	0
Glengall Ironworks	470	0	0
*Harland & Wolff, Ltd., North Woolwich	400	0	0

Tooting Bec Mental Hospital—Supply and delivery of kitchen fittings and appliances.

J. & F. May	£1,210	0	0
Carron Co.	1,082	15	0
Benham & Sons	1,047	11	8
Moorwoods, Ltd.	1,037	7	0
*Falkirk Iron Co., Ltd.	909	13	6

Tooting Bec Mental Hospital—Extension—Supply of 12 pairs of hard wood doors.

H. Morris & Co.	£461	3	0
H. C. Sayce	423	0	0
W. Harris, Steam Joinery Works	387	0	0
Philip & Tacey, Ltd.	384	2	6
Gill & Reigate	325	0	0
The North of England School Furnishing Co.	323	11	6
J. Daymond & Son	299	0	0
J. Hatch & Sons	296	0	0
J. W. Cullen	283	0	0
The Gloucester Joinery Co.	238	0	0
Scales, Son & Bragg	237	12	0
J. H. Adams & Son	275	0	0
Harding & Marks	250	0	0
J. P. White & Sons	259	0	0
Holloway Bros. (London), Ltd.	247	10	0
R. E. Shaw	286	0	0
A. Williams	230	0	0
J. Darch, Ltd.	232	0	0
Holttum & Green, Ltd.	227	0	0
R. A. Evans & Co.	201	0	0
Soole & Son, Ltd.	215	0	0
J. Garrett & Son	230	0	0
Poole Sons	202	11	0
Holland & Hannen & Cubitts, Ltd.	229	0	0
Boorman & Perkins	201	6	0
J. Harrison & Co.	204	0	0
S. Redhouse & Son	227	8	0
Guild Housing, Ltd.	174	0	0
A. Foulds, Ltd.	174	0	0
W. J. Dixon & Son	152	0	0
*F. B. Young, Teddington	147	0	0

Goldie Leigh Homes—Cleaning and painting.

F. Shipman	£1,022	0	0
Bedford & Co.	887	0	0
R. E. Shaw	865	0	0
A. Vigor, Ltd.	794	0	0
Thomas & Edge	789	0	0
Forward & Sons, Ltd.	729	10	8
The Mayfair Services, The Mayfair Window Cleaning and Decorating Co., Ltd.	724	0	0
W. Harris	716	0	0
E. A. Vickers & Son	704	18	0
Croft & Co.	684	8	7
F. Cousins	684	0	0
W. Bickerton	683	10	0
P. Miller & Son	673	0	0
Guild of Builders (London), Ltd.	670	0	0
W. Ridge & Co.	640	0	0
W. Bailey	630	0	0
J. Fenn Scott	588	0	0
W. Palmer & Sons	586	0	0
R. Mansell	585	0	0
A. Black & Son	570	0	0
J. E. Ree	558	9	8
J. H. Sutch & Sons	546	0	0
Barnes & Co.	540	0	0
S. J. Mitchell	512	0	0
H. A. Thomas & Son	510	12	0
J. Hocking & Co.	494	0	0
Thatcher & Pritchard, Ltd.	480	0	0
D. C. Bowyer	473	10	0
*F. Cory, Deptford, S.E.	457	8	6

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